			
Linde Plant ID	Air Separation Plant		
Linde Project No. tbd		Client Project No.	
Linde Project Code tbd		Client Code	
Linde Doc. No. &AA W-LX 2401 (EN)		Client Doc. No.	Client Rev.

Piping - Factorlist Piping DIN

	Inquiry	1.0	14.04.2022	E. Pitsiou, GCP	D. Bumann, GCP	E. Pitsiou, GCP	
Status	Purpose	Issue	Date	Prepared	Reviewed	Approved	Remark


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FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	10							
	NOMINAL DIAMETER	INCH	3/8" / 0.675							
	OUTSIDE DIAMETER	MM	17.2							
	WALLTHICKNESS	MM	1.4	1.6	1.8	2.0	2.3	2.6	2.9	3.2
	SCHEDULE	PN	<64	<161	>160					
1.1	PIPING IN FIELD		0.218	0.220	0.222	0.224	0.227	0.229	0.232	0.234
1.2	PIPING ON PIPERACK		0.185	0.187	0.189	0.190	0.193	0.195	0.197	0.199
1.3	PIPING DISMANTLING		0.065	0.066	0.067	0.067	0.068	0.069	0.070	0.070
2.1	FITTING (1N) CONNECTION		0.038							
2.2	FITTING (2N) CONNECTIONS		0.062							
2.3	FITTING (3N) CONNECTIONS		0.076							
2.4	FLANGE		0.048	0.057	0.067					
3.1	CIRCUMFERENTIAL WELD		0.393	0.394	0.395	0.396	0.397	0.399	0.400	0.402
3.2	FILLET WELD		0.236	0.236	0.237	0.237	0.238	0.239	0.240	0.241
3.3	MITRE WELD		0.510	0.512	0.513	0.514	0.516	0.518	0.521	0.523
3.4	BRANCH CONNECTION		0.628	0.630	0.631	0.633	0.635	0.638	0.641	0.643
3.5	WELDOLET, NIPOLET		0.821							
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15							
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)										
3.7	WELDING GASKETS		0.732							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)									
3.9	CUTTING FOR MODIFICATION		0.059	0.059	0.059	0.059	0.060	0.060	0.060	0.060
4.1-4.3	FLANGE UNION		0.445	0.557	0.624					
4.4	SPECTACLE BLIND		0.089							
4.5	PIPE BENDING TO DN 6"/150		0.156							
4.6	PREPARATION OF THREADED ENDS		0.087							
4.7	SEALING OF THREADED CONNECTION		0.074							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7									
5.1	VALVE INSTALLATION		0.093	0.114	0.134					
5.2	INSTALLATION OF ACTUATED VALVE		0.139	0.155	0.175					
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.058	0.064	0.072					
5.4	WAFER TYP VALVE INSTALLATION		0.024	0.027	0.030					
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	0.437	0.656	0.875					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5									
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.032							
6.2	SERVICETEST		0.022							
7.1	NOZZLE REINFORCING BRACKETS		0.200							
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS		0.089							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION		0.087							

		FACTORLIST PIPING - DIN					LindeEntityCode_ph-W-LX 2401			
POS.	NOMINAL DIAMETER	MM	15							
	NOMINAL DIAMETER	INCH	1/2" / 0.840							
	OUTSIDE DIAMETER	MM	21.3							
	WALLTHICKNESS	MM	1.4	1.6	1.8	2.0	2.3	2.6	2.9	3.2
	SCHEDULE	PN	<64	<161	>160					
1.1	PIPING IN FIELD		0.222	0.225	0.227	0.230	0.233	0.237	0.240	0.243
1.2	PIPING ON PIPERACK		0.189	0.191	0.193	0.195	0.198	0.201	0.204	0.206
1.3	PIPING DISMANTLING		0.067	0.067	0.068	0.069	0.070	0.071	0.072	0.073
2.1	FITTING (1N) CONNECTION		0.053							
2.2	FITTING (2N) CONNECTIONS		0.087							
2.3	FITTING (3N) CONNECTIONS		0.107							
2.4	FLANGE		0.067	0.080	0.093					
3.1	CIRCUMFERENTIAL WELD		0.429	0.430	0.432	0.433	0.435	0.437	0.439	0.442
3.2	FILLET WELD		0.258	0.258	0.259	0.260	0.261	0.262	0.264	0.265
3.3	MITRE WELD		0.558	0.559	0.561	0.563	0.565	0.568	0.571	0.574
3.4	BRANCH CONNECTION		0.687	0.689	0.690	0.693	0.696	0.699	0.703	0.707
3.5	WELDOLET, NIPOLET		0.909							
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15							
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)										
3.7	WELDING GASKETS		0.806							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)									
3.9	CUTTING FOR MODIFICATION		0.064	0.065	0.065	0.065	0.065	0.066	0.066	0.066
4.1-4.3	FLANGE UNION		0.461	0.577	0.646					
4.4	SPECTACLE BLIND		0.092							
4.5	PIPE BENDING TO DN 6"/150		0.173							
4.6	PREPARATION OF THREADED ENDS		0.096							
4.7	SEALING OF THREADED CONNECTION		0.081							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7									
5.1	VALVE INSTALLATION		0.145	0.177	0.210					
5.2	INSTALLATION OF ACTUATED VALVE		0.218	0.242	0.274					
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.093	0.101	0.114					
5.4	WAFER TYP VALVE INSTALLATION		0.039	0.044	0.049					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		0.437	0.656	0.875					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5									
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.036							
6.2	SERVICETEST		0.025							
7.1	NOZZLE REINFORCING BRACKETS		0.200							
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS		0.092							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION		0.096							

		FACTORLIST PIPING - DIN					LindeEntityCode_ph-W-LX 2401			
POS.	NOMINAL DIAMETER	MM	20							
	NOMINAL DIAMETER	INCH	1/4" / 1.050							
	OUTSIDE DIAMETER	MM	26.9							
	WALLTHICKNESS	MM	1.6	1.8	2.0	2.3	2.6	2.9	3.2	3.6
	SCHEDULE	PN	<64	<161	>160					
1.1	PIPING IN FIELD		0.231	0.234	0.237	0.242	0.246	0.251	0.255	0.260
1.2	PIPING ON PIPERACK		0.196	0.199	0.202	0.206	0.209	0.213	0.216	0.221
1.3	PIPING DISMANTLING		0.069	0.070	0.071	0.073	0.074	0.075	0.076	0.078
2.1	FITTING (1N) CONNECTION		0.069							
2.2	FITTING (2N) CONNECTIONS		0.112							
2.3	FITTING (3N) CONNECTIONS		0.137							
2.4	FLANGE		0.086	0.103	0.120					
3.1	CIRCUMFERENTIAL WELD		0.481	0.482	0.484	0.486	0.489	0.492	0.495	0.500
3.2	FILLET WELD		0.288	0.289	0.290	0.292	0.294	0.295	0.297	0.300
3.3	MITRE WELD		0.625	0.627	0.629	0.632	0.636	0.640	0.644	0.650
3.4	BRANCH CONNECTION		0.769	0.771	0.774	0.778	0.783	0.788	0.793	0.799
3.5	WELDOLET, NIPOLET		1.030							
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15							
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)										
3.7	WELDING GASKETS		0.907							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)									
3.9	CUTTING FOR MODIFICATION		0.072	0.072	0.073	0.073	0.073	0.074	0.074	0.075
4.1-4.3	FLANGE UNION		0.479	0.598	0.670					
4.4	SPECTACLE BLIND		0.096							
4.5	PIPE BENDING TO DN 6"/150		0.191							
4.6	PREPARATION OF THREADED ENDS		0.106							
4.7	SEALING OF THREADED CONNECTION		0.090							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7									
5.1	VALVE INSTALLATION		0.199	0.243	0.288					
5.2	INSTALLATION OF ACTUATED VALVE		0.299	0.332	0.376					
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.129	0.141	0.159					
5.4	WAFER TYP VALVE INSTALLATION		0.057	0.064	0.071					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		0.437	0.656	0.875					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5									
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.039							
6.2	SERVICETEST		0.027							
7.1	NOZZLE REINFORCING BRACKETS		0.200							
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS		0.096							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION		0.106							



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	25								
	NOMINAL DIAMETER	INCH	1" / 1.315								
	OUTSIDE DIAMETER	MM	33.7								
	WALLTHICKNESS	MM	1.6	1.8	2.0	2.3	2.6	2.9	3.2	3.6	
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		0.238	0.242	0.246	0.252	0.258	0.263	0.268	0.275	
1.2	PIPING ON PIPERACK		0.203	0.206	0.209	0.214	0.219	0.224	0.228	0.234	
1.3	PIPING DISMANTLING		0.072	0.073	0.074	0.076	0.077	0.079	0.081	0.083	
2.1	FITTING (1N) CONNECTION		0.084								
2.2	FITTING (2N) CONNECTIONS		0.137								
2.3	FITTING (3N) CONNECTIONS		0.168								
2.4	FLANGE		0.105	0.126	0.147						
3.1	CIRCUMFERENTIAL WELD		0.541	0.543	0.546	0.549	0.553	0.557	0.561	0.566	
3.2	FILLET WELD		0.325	0.326	0.327	0.329	0.332	0.334	0.336	0.340	
3.3	MITRE WELD		0.704	0.707	0.709	0.714	0.719	0.724	0.729	0.736	
3.4	BRANCH CONNECTION		0.866	0.870	0.873	0.879	0.884	0.891	0.897	0.906	
3.5	WELDOLET, NIPOLET		1.177								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		1.030								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)										
3.9	CUTTING FOR MODIFICATION		0.081	0.082	0.082	0.082	0.083	0.084	0.084	0.085	
4.1-4.3	FLANGE UNION		0.498	0.622	0.697						
4.4	SPECTACLE BLIND		0.100								
4.5	PIPE BENDING TO DN 6"/150		0.213								
4.6	PREPARATION OF THREADED ENDS		0.118								
4.7	SEALING OF THREADED CONNECTION		0.100								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		0.255	0.311	0.368						
5.2	INSTALLATION OF ACTUATED VALVE		0.382	0.424	0.481						
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.167	0.182	0.205						
5.4	WAFER TYP VALVE INSTALLATION		0.075	0.084	0.093						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		0.437	0.656	0.875						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.043								
6.2	SERVICETEST		0.030								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.100								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION		0.118								



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	25						
	NOMINAL DIAMETER	INCH	1" / 1.315						
	OUTSIDE DIAMETER	MM	33.7						
	WALLTHICKNESS	MM	4.0	4.5	5.0	5.6	6.3	7.1	8.0
	SCHEDULE	PN	<64	<161	>160				
1.1	PIPING IN FIELD		0.282	0.290	0.297	0.305	0.314	0.324	0.334
1.2	PIPING ON PIPERACK		0.239	0.246	0.252	0.259	0.267	0.275	0.284
1.3	PIPING DISMANTLING		0.085	0.087	0.089	0.092	0.094	0.097	0.100
2.1	FITTING (1N) CONNECTION		0.084						
2.2	FITTING (2N) CONNECTIONS		0.137						
2.3	FITTING (3N) CONNECTIONS		0.168						
2.4	FLANGE		0.105	0.126	0.147				
3.1	CIRCUMFERENTIAL WELD		0.572	0.580	0.588	0.598	0.610	0.623	0.639
3.2	FILLET WELD		0.343	0.348	0.353	0.359	0.366	0.374	0.383
3.3	MITRE WELD		0.744	0.754	0.764	0.777	0.793	0.810	0.831
3.4	BRANCH CONNECTION		0.916	0.928	0.941	0.957	0.975	0.997	1.023
3.5	WELDOLET, NIPOLET		1.177						
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15						
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)									
3.7	WELDING GASKETS		1.030						
3.8	BACKINGRING (FOR ALUMINIUM ONLY)								
3.9	CUTTING FOR MODIFICATION		0.086	0.087	0.088	0.090	0.091	0.094	0.096
4.1-4.3	FLANGE UNION		0.498	0.622	0.697				
4.4	SPECTACLE BLIND		0.100						
4.5	PIPE BENDING TO DN 6"/150		0.213						
4.6	PREPARATION OF THREADED ENDS		0.118						
4.7	SEALING OF THREADED CONNECTION		0.100						
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7								
5.1	VALVE INSTALLATION		0.255	0.311	0.368				
5.2	INSTALLATION OF ACTUATED VALVE		0.382	0.424	0.481				
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.167	0.182	0.205				
5.4	WAFER TYP VALVE INSTALLATION		0.075	0.084	0.093				
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	0.437	0.656	0.875				
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5								
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.043						
6.2	SERVICETEST		0.030						
7.1	NOZZLE REINFORCING BRACKETS		0.200						
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3						
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3						
7.4	EXCESS MATER. ON WELDING ROOTS		0.100						
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION		0.118						



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	32								
	NOMINAL DIAMETER	INCH	1 1/4" / 1.660								
	OUTSIDE DIAMETER	MM	42.4								
	WALLTHICKNESS	MM	1.4	1.6	2.0	2.3	2.6	2.9	3.2	3.6	
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		0.242	0.248	0.258	0.265	0.272	0.279	0.286	0.295	
1.2	PIPING ON PIPERACK		0.206	0.211	0.219	0.225	0.231	0.237	0.243	0.250	
1.3	PIPING DISMANTLING		0.073	0.074	0.077	0.080	0.082	0.084	0.086	0.088	
2.1	FITTING (1N) CONNECTION		0.105								
2.2	FITTING (2N) CONNECTIONS		0.171								
2.3	FITTING (3N) CONNECTIONS		0.211								
2.4	FLANGE		0.132	0.158	0.185						
3.1	CIRCUMFERENTIAL WELD		0.617	0.619	0.625	0.629	0.634	0.639	0.644	0.652	
3.2	FILLET WELD		0.370	0.372	0.375	0.378	0.380	0.383	0.387	0.391	
3.3	MITRE WELD		0.802	0.805	0.812	0.818	0.824	0.831	0.838	0.847	
3.4	BRANCH CONNECTION		0.987	0.991	1.000	1.007	1.014	1.022	1.031	1.043	
3.5	WELDOLET, NIPOLET		1.365								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		1.187								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)										
3.9	CUTTING FOR MODIFICATION		0.093	0.093	0.094	0.094	0.095	0.096	0.097	0.098	
4.1-4.3	FLANGE UNION		0.526	0.657	0.736						
4.4	SPECTACLE BLIND		0.105								
4.5	PIPE BENDING TO DN 6"/150		0.247								
4.6	PREPARATION OF THREADED ENDS		0.137								
4.7	SEALING OF THREADED CONNECTION		0.116								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		0.334	0.408	0.482						
5.2	INSTALLATION OF ACTUATED VALVE		0.501	0.557	0.631						
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.221	0.241	0.271						
5.4	WAFER TYP VALVE INSTALLATION		0.102	0.114	0.127						
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	0.472	0.691	0.910						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.047								
6.2	SERVICETEST		0.033								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.105								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401


POS.	NOMINAL DIAMETER	MM	32								
	NOMINAL DIAMETER	INCH	1 1/4" / 1.660								
	OUTSIDE DIAMETER	MM	42.4								
	WALLTHICKNESS	MM	4.0	4.5	5.0	5.6	6.3	7.1	8.0	8.8	
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		0.303	0.313	0.323	0.334	0.347	0.360	0.374	0.386	
1.2	PIPING ON PIPERACK		0.258	0.266	0.275	0.284	0.295	0.306	0.318	0.328	
1.3	PIPING DISMANTLING		0.091	0.094	0.097	0.100	0.104	0.108	0.112	0.116	
2.1	FITTING (1N) CONNECTION		0.105								
2.2	FITTING (2N) CONNECTIONS		0.171								
2.3	FITTING (3N) CONNECTIONS		0.211								
2.4	FLANGE		0.132	0.158	0.185						
3.1	CIRCUMFERENTIAL WELD		0.660	0.670	0.680	0.694	0.710	0.729	0.751	0.771	
3.2	FILLET WELD		0.396	0.402	0.408	0.416	0.426	0.437	0.450	0.462	
3.3	MITRE WELD		0.857	0.871	0.884	0.902	0.923	0.947	0.976	1.002	
3.4	BRANCH CONNECTION		1.055	1.072	1.089	1.110	1.136	1.166	1.201	1.233	
3.5	WELDOLET, NIPOLET		1.365								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		1.187								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)										
3.9	CUTTING FOR MODIFICATION		0.099	0.100	0.102	0.104	0.106	0.109	0.113	0.116	
4.1-4.3	FLANGE UNION		0.526	0.657	0.736						
4.4	SPECTACLE BLIND		0.105								
4.5	PIPE BENDING TO DN 6"/150		0.247								
4.6	PREPARATION OF THREADED ENDS		0.137								
4.7	SEALING OF THREADED CONNECTION		0.116								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		0.334	0.408	0.482						
5.2	INSTALLATION OF ACTUATED VALVE		0.501	0.557	0.631						
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.221	0.241	0.271						
5.4	WAFER TYP VALVE INSTALLATION		0.102	0.114	0.127						
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	0.472	0.691	0.910						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.047								
6.2	SERVICETEST		0.033								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.105								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										




FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	40								
	NOMINAL DIAMETER	INCH	1 1/2" / 1.900								
	OUTSIDE DIAMETER	MM	48.3								
	WALLTHICKNESS	MM	1.4	1.6	1.8	2.0	2.3	2.6	2.9	3.2	
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		0.248	0.254	0.260	0.265	0.274	0.282	0.290	0.297	
1.2	PIPING ON PIPERACK		0.211	0.216	0.221	0.226	0.233	0.239	0.246	0.253	
1.3	PIPING DISMANTLING		0.074	0.076	0.078	0.080	0.082	0.085	0.087	0.089	
2.1	FITTING (1N) CONNECTION		0.130								
2.2	FITTING (2N) CONNECTIONS		0.211								
2.3	FITTING (3N) CONNECTIONS		0.260								
2.4	FLANGE		0.163	0.195	0.228						
3.1	CIRCUMFERENTIAL WELD		0.669	0.672	0.675	0.678	0.684	0.689	0.695	0.701	
3.2	FILLET WELD		0.402	0.403	0.405	0.407	0.410	0.413	0.417	0.421	
3.3	MITRE WELD		0.870	0.874	0.878	0.882	0.889	0.896	0.903	0.911	
3.4	BRANCH CONNECTION		1.071	1.076	1.080	1.086	1.094	1.103	1.112	1.122	
3.5	WELDOLET, NIPOLET		1.492								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		1.294								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)										
3.9	CUTTING FOR MODIFICATION		0.100	0.101	0.101	0.102	0.103	0.103	0.104	0.105	
4.1-4.3	FLANGE UNION		0.561	0.701	0.785						
4.4	SPECTACLE BLIND		0.112								
4.5	PIPE BENDING TO DN 6"/150		0.292								
4.6	PREPARATION OF THREADED ENDS		0.162								
4.7	SEALING OF THREADED CONNECTION		0.138								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		0.427	0.522	0.617						
5.2	INSTALLATION OF ACTUATED VALVE		0.640	0.711	0.806						
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.286	0.312	0.351						
5.4	WAFER TYP VALVE INSTALLATION		0.134	0.151	0.168						
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	0.513	0.732	0.951						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.053								
6.2	SERVICETEST		0.037								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.112								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										

		FACTORLIST PIPING - DIN					LindeEntityCode_ph-W-LX 2401			
POS.	NOMINAL DIAMETER	MM	40							
	NOMINAL DIAMETER	INCH	1 1/2" / 1.900							
	OUTSIDE DIAMETER	MM	48.3							
	WALLTHICKNESS	MM	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0
	SCHEDULE	PN	<64	<161	>160					
1.1	PIPING IN FIELD		0.307	0.317	0.329	0.340	0.353	0.368	0.384	0.401
1.2	PIPING ON PIPERACK		0.261	0.270	0.280	0.289	0.300	0.313	0.326	0.341
1.3	PIPING DISMANTLING		0.092	0.095	0.099	0.102	0.106	0.110	0.115	0.120
2.1	FITTING (1N) CONNECTION		0.130							
2.2	FITTING (2N) CONNECTIONS		0.211							
2.3	FITTING (3N) CONNECTIONS		0.260							
2.4	FLANGE		0.163	0.195	0.228					
3.1	CIRCUMFERENTIAL WELD		0.710	0.719	0.731	0.743	0.759	0.778	0.800	0.827
3.2	FILLET WELD		0.426	0.431	0.438	0.446	0.455	0.467	0.480	0.496
3.3	MITRE WELD		0.923	0.934	0.950	0.966	0.986	1.011	1.040	1.074
3.4	BRANCH CONNECTION		1.135	1.150	1.169	1.189	1.214	1.244	1.280	1.322
3.5	WELDOLET, NIPOLET		1.492							
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15							
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)										
3.7	WELDING GASKETS		1.294							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)									
3.9	CUTTING FOR MODIFICATION		0.106	0.108	0.110	0.111	0.114	0.117	0.120	0.124
4.1-4.3	FLANGE UNION		0.561	0.701	0.785					
4.4	SPECTACLE BLIND		0.112							
4.5	PIPE BENDING TO DN 6"/150		0.292							
4.6	PREPARATION OF THREADED ENDS		0.162							
4.7	SEALING OF THREADED CONNECTION		0.138							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7									
5.1	VALVE INSTALLATION		0.427	0.522	0.617					
5.2	INSTALLATION OF ACTUATED VALVE		0.640	0.711	0.806					
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.286	0.312	0.351					
5.4	WAFER TYP VALVE INSTALLATION		0.134	0.151	0.168					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		0.513	0.732	0.951					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5									
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.053							
6.2	SERVICETEST		0.037							
7.1	NOZZLE REINFORCING BRACKETS		0.200							
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS		0.112							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION									

		FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER	MM	40				50			
	NOMINAL DIAMETER	INCH	1 1/2" / 1.900				2" / 2.375			
	OUTSIDE DIAMETER	MM	48.3				60.3			
	WALLTHICKNESS	MM	8.8	10.0	11.0	12.5	1.4	1.6	1.8	2.0
	SCHEDULE	PN	<64	<161	>160		<64	<161	>160	
1.1	PIPING IN FIELD		0.415	0.434	0.449	0.470	0.259	0.266	0.273	0.280
1.2	PIPING ON PIPERACK		0.353	0.369	0.382	0.399	0.220	0.226	0.232	0.238
1.3	PIPING DISMANTLING		0.124	0.130	0.135	0.141	0.078	0.080	0.082	0.084
2.1	FITTING (1N) CONNECTION		0.130				0.161			
2.2	FITTING (2N) CONNECTIONS		0.211				0.261			
2.3	FITTING (3N) CONNECTIONS		0.260				0.321			
2.4	FLANGE		0.163	0.195	0.228		0.201	0.241	0.281	
3.1	CIRCUMFERENTIAL WELD		0.850	0.887	0.918	0.964	0.776	0.780	0.784	0.788
3.2	FILLET WELD		0.510	0.532	0.551	0.579	0.466	0.468	0.470	0.473
3.3	MITRE WELD		1.106	1.153	1.193	1.254	1.009	1.014	1.019	1.024
3.4	BRANCH CONNECTION		1.361	1.419	1.469	1.543	1.242	1.248	1.254	1.260
3.5	WELDOLET, NIPOLET		1.492				1.752			
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15							
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)										
3.7	WELDING GASKETS		1.294				1.510			
3.8	BACKINGRING (FOR ALUMINIUM ONLY)									
3.9	CUTTING FOR MODIFICATION		0.128	0.133	0.138	0.145	0.116	0.117	0.118	0.118
4.1-4.3	FLANGE UNION		0.561	0.701	0.785		0.607	0.759	0.850	
4.4	SPECTACLE BLIND		0.112				0.121			
4.5	PIPE BENDING TO DN 6"/150		0.292				0.358			
4.6	PREPARATION OF THREADED ENDS		0.162				0.199			
4.7	SEALING OF THREADED CONNECTION		0.138				0.169			
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7		80							
5.1	VALVE INSTALLATION		0.427	0.522	0.617		0.546	0.667	0.788	
5.2	INSTALLATION OF ACTUATED VALVE		0.640	0.711	0.806		0.818	0.909	1.031	
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.286	0.312	0.351		0.369	0.402	0.453	
5.4	WAFER TYP VALVE INSTALLATION		0.134	0.151	0.168		0.178	0.200	0.222	
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		0.513	0.732	0.951		0.564	0.783	1.002	
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5									
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.053				0.060			
6.2	SERVICETEST		0.037				0.042			
7.1	NOZZLE REINFORCING BRACKETS		0.200				0.200			
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS		0.112				0.121			
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION									



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401


POS.	NOMINAL DIAMETER	MM	50							
	NOMINAL DIAMETER	INCH	2" / 2.375							
	OUTSIDE DIAMETER	MM	60.3							
	WALLTHICKNESS	MM	2.3	2.6	2.9	3.2	3.6	4.0	4.5	5.0
	SCHEDULE	PN	<64	<161	>160					
1.1	PIPING IN FIELD		0.291	0.301	0.311	0.320	0.333	0.345	0.360	0.375
1.2	PIPING ON PIPERACK		0.247	0.256	0.264	0.272	0.283	0.294	0.306	0.319
1.3	PIPING DISMANTLING		0.087	0.090	0.093	0.096	0.100	0.104	0.108	0.112
2.1	FITTING (1N) CONNECTION		0.161							
2.2	FITTING (2N) CONNECTIONS		0.261							
2.3	FITTING (3N) CONNECTIONS		0.321							
2.4	FLANGE		0.201	0.241	0.281					
3.1	CIRCUMFERENTIAL WELD		0.794	0.801	0.809	0.816	0.827	0.839	0.854	0.870
3.2	FILLET WELD		0.476	0.481	0.485	0.490	0.496	0.503	0.513	0.522
3.3	MITRE WELD		1.032	1.041	1.051	1.061	1.076	1.091	1.111	1.132
3.4	BRANCH CONNECTION		1.271	1.282	1.294	1.306	1.324	1.342	1.367	1.393
3.5	WELDOLET, NIPOLET		1.752							
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15							
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)										
3.7	WELDING GASKETS		1.510							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)									
3.9	CUTTING FOR MODIFICATION		0.119	0.120	0.121	0.122	0.124	0.126	0.128	0.131
4.1-4.3	FLANGE UNION		0.607	0.759	0.850					
4.4	SPECTACLE BLIND		0.121							
4.5	PIPE BENDING TO DN 6"/150		0.358							
4.6	PREPARATION OF THREADED ENDS		0.199							
4.7	SEALING OF THREADED CONNECTION		0.169							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7									
5.1	VALVE INSTALLATION		0.546	0.667	0.788					
5.2	INSTALLATION OF ACTUATED VALVE		0.818	0.909	1.031					
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.369	0.402	0.453					
5.4	WAFER TYP VALVE INSTALLATION		0.178	0.200	0.222					
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	0.564	0.783	1.002					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5									
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.060							
6.2	SERVICETEST		0.042							
7.1	NOZZLE REINFORCING BRACKETS		0.200							
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS		0.121							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION									



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	50								
	NOMINAL DIAMETER	INCH	2" / 2.375								
	OUTSIDE DIAMETER	MM	60.3								
	WALLTHICKNESS	MM	5.6	6.3	7.1	8.0	8.8	10.0	12.5	14.2	
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		0.392	0.411	0.432	0.454	0.473	0.500	0.550	0.580	
1.2	PIPING ON PIPERACK		0.333	0.349	0.367	0.386	0.402	0.425	0.467	0.493	
1.3	PIPING DISMANTLING		0.118	0.123	0.129	0.136	0.142	0.150	0.165	0.174	
2.1	FITTING (1N) CONNECTION		0.161								
2.2	FITTING (2N) CONNECTIONS		0.261								
2.3	FITTING (3N) CONNECTIONS		0.321								
2.4	FLANGE		0.201	0.241	0.281						
3.1	CIRCUMFERENTIAL WELD		0.891	0.916	0.946	0.981	1.013	1.063	1.171	1.246	
3.2	FILLET WELD		0.534	0.549	0.567	0.588	0.608	0.638	0.703	0.747	
3.3	MITRE WELD		1.158	1.190	1.229	1.275	1.317	1.382	1.522	1.619	
3.4	BRANCH CONNECTION		1.425	1.465	1.513	1.569	1.621	1.700	1.873	1.993	
3.5	WELDOLET, NIPOLET		1.752								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		1.510								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)										
3.9	CUTTING FOR MODIFICATION		0.134	0.137	0.142	0.147	0.152	0.159	0.176	0.187	
4.1-4.3	FLANGE UNION		0.607	0.759	0.850						
4.4	SPECTACLE BLIND		0.121								
4.5	PIPE BENDING TO DN 6"/150		0.358								
4.6	PREPARATION OF THREADED ENDS		0.199								
4.7	SEALING OF THREADED CONNECTION		0.169								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		0.546	0.667	0.788						
5.2	INSTALLATION OF ACTUATED VALVE		0.818	0.909	1.031						
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.369	0.402	0.453						
5.4	WAFER TYP VALVE INSTALLATION		0.178	0.200	0.222						
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	0.564	0.783	1.002						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.060								
6.2	SERVICETEST		0.042								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.121								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										

		FACTORLIST PIPING - DIN					LindeEntityCode_ph-W-LX 2401			
POS.	NOMINAL DIAMETER	MM	65							
	NOMINAL DIAMETER	INCH	2 1/2" / 2.875							
	OUTSIDE DIAMETER	MM	76.1							
	WALLTHICKNESS	MM	1.6	1.8	2.0	2.3	2.6	2.9	3.2	3.6
	SCHEDULE	PN	<64	<161	>160					
1.1	PIPING IN FIELD		0.282	0.291	0.300	0.313	0.325	0.338	0.350	0.366
1.2	PIPING ON PIPERACK		0.240	0.247	0.255	0.266	0.277	0.287	0.298	0.311
1.3	PIPING DISMANTLING		0.085	0.087	0.090	0.094	0.098	0.101	0.105	0.110
2.1	FITTING (1N) CONNECTION		0.207							
2.2	FITTING (2N) CONNECTIONS		0.336							
2.3	FITTING (3N) CONNECTIONS		0.413							
2.4	FLANGE		0.258	0.310	0.362					
3.1	CIRCUMFERENTIAL WELD		0.921	0.926	0.931	0.940	0.949	0.958	0.968	0.982
3.2	FILLET WELD		0.553	0.556	0.559	0.564	0.569	0.575	0.581	0.589
3.3	MITRE WELD		1.198	1.204	1.211	1.222	1.233	1.246	1.259	1.277
3.4	BRANCH CONNECTION		1.474	1.482	1.490	1.503	1.518	1.533	1.549	1.572
3.5	WELDOLET, NIPOLET		2.093							
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15							
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)										
3.7	WELDING GASKETS		1.795							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)									
3.9	CUTTING FOR MODIFICATION		0.138	0.139	0.140	0.141	0.142	0.144	0.145	0.147
4.1-4.3	FLANGE UNION		0.682	0.852	0.954					
4.4	SPECTACLE BLIND		0.136							
4.5	PIPE BENDING TO DN 6"/150		0.477							
4.6	PREPARATION OF THREADED ENDS		0.265							
4.7	SEALING OF THREADED CONNECTION		0.225							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7									
5.1	VALVE INSTALLATION		0.728	0.890	1.052					
5.2	INSTALLATION OF ACTUATED VALVE		1.092	1.214	1.376					
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.498	0.543	0.611					
5.4	WAFER TYP VALVE INSTALLATION		0.247	0.277	0.308					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		0.641	0.860	1.079					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5									
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.071							
6.2	SERVICETEST		0.049							
7.1	NOZZLE REINFORCING BRACKETS		0.200							
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS		0.136							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION									



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401


POS.	NOMINAL DIAMETER	MM	65								
	NOMINAL DIAMETER	INCH	2 1/2" / 2.875								
	OUTSIDE DIAMETER	MM	76.1								
	WALLTHICKNESS	MM	4.0	4.5	5.0	5.6	6.3	7.1	8.0	10.0	
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		0.382	0.401	0.419	0.441	0.465	0.493	0.522	0.583	
1.2	PIPING ON PIPERACK		0.324	0.341	0.356	0.375	0.396	0.419	0.444	0.496	
1.3	PIPING DISMANTLING		0.114	0.120	0.126	0.132	0.140	0.148	0.157	0.175	
2.1	FITTING (1N) CONNECTION		0.207								
2.2	FITTING (2N) CONNECTIONS		0.336								
2.3	FITTING (3N) CONNECTIONS		0.413								
2.4	FLANGE		0.258	0.310	0.362						
3.1	CIRCUMFERENTIAL WELD		0.997	1.017	1.038	1.065	1.097	1.137	1.183	1.294	
3.2	FILLET WELD		0.598	0.610	0.623	0.639	0.658	0.682	0.710	0.776	
3.3	MITRE WELD		1.297	1.322	1.350	1.384	1.427	1.478	1.538	1.682	
3.4	BRANCH CONNECTION		1.596	1.628	1.661	1.704	1.756	1.819	1.893	2.071	
3.5	WELDOLET, NIPOLET		2.093								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		1.795								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)										
3.9	CUTTING FOR MODIFICATION		0.150	0.153	0.156	0.160	0.165	0.171	0.178	0.194	
4.1-4.3	FLANGE UNION		0.682	0.852	0.954						
4.4	SPECTACLE BLIND		0.136								
4.5	PIPE BENDING TO DN 6"/150		0.477								
4.6	PREPARATION OF THREADED ENDS		0.265								
4.7	SEALING OF THREADED CONNECTION		0.225								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		0.728	0.890	1.052						
5.2	INSTALLATION OF ACTUATED VALVE		1.092	1.214	1.376						
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.498	0.543	0.611						
5.4	WAFER TYP VALVE INSTALLATION		0.247	0.277	0.308						
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	0.641	0.860	1.079						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.071								
6.2	SERVICETEST		0.049								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.136								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										




FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	65								
	NOMINAL DIAMETER	INCH	2 1/2" / 2.875								
	OUTSIDE DIAMETER	MM	76.1								
	WALLTHICKNESS	MM	11.0	12.5	14.2	16.0	17.5	20.0			
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		0.612	0.652	0.695	0.737	0.769	0.817			
1.2	PIPING ON PIPERACK		0.520	0.554	0.591	0.626	0.653	0.694			
1.3	PIPING DISMANTLING		0.184	0.196	0.209	0.221	0.231	0.245			
2.1	FITTING (1N) CONNECTION		0.207								
2.2	FITTING (2N) CONNECTIONS		0.336								
2.3	FITTING (3N) CONNECTIONS		0.413								
2.4	FLANGE		0.258	0.310	0.362						
3.1	CIRCUMFERENTIAL WELD		1.352	1.443	1.548	1.662	1.758	1.918			
3.2	FILLET WELD		0.811	0.866	0.929	0.997	1.055	1.151			
3.3	MITRE WELD		1.758	1.876	2.013	2.161	2.286	2.493			
3.4	BRANCH CONNECTION		2.164	2.309	2.477	2.660	2.813	3.069			
3.5	WELDOLET, NIPOLET		2.093								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		1.795								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)										
3.9	CUTTING FOR MODIFICATION		0.203	0.216	0.232	0.249	0.264	0.288			
4.1-4.3	FLANGE UNION		0.682	0.852	0.954						
4.4	SPECTACLE BLIND		0.136								
4.5	PIPE BENDING TO DN 6"/150		0.477								
4.6	PREPARATION OF THREADED ENDS		0.265								
4.7	SEALING OF THREADED CONNECTION		0.225								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		0.728	0.890	1.052						
5.2	INSTALLATION OF ACTUATED VALVE		1.092	1.214	1.376						
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.498	0.543	0.611						
5.4	WAFER TYP VALVE INSTALLATION		0.247	0.277	0.308						
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	0.641	0.860	1.079						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.071								
6.2	SERVICETEST		0.049								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.136								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401					
POS.	NOMINAL DIAMETER			MM	80								
	NOMINAL DIAMETER			INCH	3" / 3.500								
	OUTSIDE DIAMETER			MM	88.9								
	WALLTHICKNESS			MM	1.6	1.8	2.0	2.3	2.6	2.9	3.2	3.6	
	SCHEDULE			PN	<64	<161	>160						
1.1	PIPING IN FIELD				0.295	0.305	0.315	0.330	0.345	0.359	0.374	0.392	
1.2	PIPING ON PIPERACK				0.250	0.259	0.268	0.281	0.293	0.305	0.318	0.333	
1.3	PIPING DISMANTLING				0.088	0.091	0.095	0.099	0.103	0.108	0.112	0.118	
2.1	FITTING (1N) CONNECTION				0.253								
2.2	FITTING (2N) CONNECTIONS				0.411								
2.3	FITTING (3N) CONNECTIONS				0.505								
2.4	FLANGE				0.316	0.379	0.442						
3.1	CIRCUMFERENTIAL WELD				1.036	1.042	1.048	1.058	1.068	1.079	1.091	1.108	
3.2	FILLET WELD				0.622	0.625	0.629	0.635	0.641	0.648	0.655	0.665	
3.3	MITRE WELD				1.347	1.354	1.362	1.375	1.389	1.403	1.418	1.440	
3.4	BRANCH CONNECTION				1.658	1.667	1.676	1.692	1.709	1.727	1.746	1.773	
3.5	WELDOLET, NIPOLET				2.369								
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15								
	BRANCH - DN			15 121	0.993	0.999	1.005	1.015	1.026	1.037	1.050	1.067	
	DN			20 127	1.033	1.039	1.046	1.056	1.068	1.080	1.093	1.111	
	DN			25 134	1.080	1.087	1.094	1.105	1.117	1.130	1.143	1.163	
	DN			40 148	1.174	1.181	1.189	1.201	1.215	1.229	1.244	1.266	
	DN			50 160	1.255	1.263	1.271	1.284	1.299	1.314	1.331	1.354	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)													
3.7	WELDING GASKETS				2.026								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)												
3.9	CUTTING FOR MODIFICATION				0.155	0.156	0.157	0.159	0.160	0.162	0.164	0.166	
4.1-4.3	FLANGE UNION				0.762	0.953	1.067						
4.4	SPECTACLE BLIND				0.152								
4.5	PIPE BENDING TO DN 6"/150				0.618								
4.6	PREPARATION OF THREADED ENDS				0.344								
4.7	SEALING OF THREADED CONNECTION				0.292								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7												
5.1	VALVE INSTALLATION				0.915	1.118	1.322						
5.2	INSTALLATION OF ACTUATED VALVE				1.373	1.525	1.728						
5.3	INST. OF ACTUATED WAFER TYP VALVE				0.632	0.689	0.775						
5.4	WAFER TYP VALVE INSTALLATION				0.320	0.360	0.400						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				0.717	0.936	1.155						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5												
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.081								
6.2	SERVICETEST				0.057								
7.1	NOZZLE REINFORCING BRACKETS				0.200								
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS				0.152								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION												


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	80							
	NOMINAL DIAMETER			INCH	3" / 3.500							
	OUTSIDE DIAMETER			MM	88.9							
	WALLTHICKNESS			MM	4.0	4.5	5.0	5.6	6.3	7.1	8.0	8.8
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				0.410	0.433	0.454	0.480	0.509	0.541	0.576	0.606
1.2	PIPING ON PIPERACK				0.349	0.368	0.386	0.408	0.433	0.460	0.489	0.515
1.3	PIPING DISMANTLING				0.123	0.130	0.136	0.144	0.153	0.162	0.173	0.182
2.1	FITTING (1N) CONNECTION				0.253							
2.2	FITTING (2N) CONNECTIONS				0.411							
2.3	FITTING (3N) CONNECTIONS				0.505							
2.4	FLANGE				0.316	0.379	0.442					
3.1	CIRCUMFERENTIAL WELD				1.126	1.149	1.174	1.206	1.245	1.292	1.348	1.400
3.2	FILLET WELD				0.675	0.690	0.704	0.723	0.747	0.775	0.809	0.840
3.3	MITRE WELD				1.463	1.494	1.526	1.567	1.618	1.679	1.752	1.820
3.4	BRANCH CONNECTION				1.801	1.839	1.879	1.929	1.992	2.067	2.156	2.240
3.5	WELDOLET, NIPOLET				2.369							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	121	1.086	1.110	1.136	1.169	1.211	1.260	1.320	1.376	
	DN	20	127	1.131	1.157	1.184	1.219	1.262	1.315	1.378	1.436	
	DN	25	134	1.183	1.211	1.240	1.277	1.323	1.378	1.445	1.508	
	DN	40	148	1.289	1.319	1.351	1.392	1.443	1.506	1.580	1.650	
	DN	50	160	1.379	1.412	1.447	1.492	1.547	1.615	1.695	1.771	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				2.026							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)											
3.9	CUTTING FOR MODIFICATION				0.169	0.172	0.176	0.181	0.187	0.194	0.202	0.210
4.1-4.3	FLANGE UNION				0.762	0.953	1.067					
4.4	SPECTACLE BLIND				0.152							
4.5	PIPE BENDING TO DN 6"/150				0.618							
4.6	PREPARATION OF THREADED ENDS				0.344							
4.7	SEALING OF THREADED CONNECTION				0.292							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				0.915	1.118	1.322					
5.2	INSTALLATION OF ACTUATED VALVE				1.373	1.525	1.728					
5.3	INST. OF ACTUATED WAFER TYP VALVE				0.632	0.689	0.775					
5.4	WAFER TYP VALVE INSTALLATION				0.320	0.360	0.400					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				0.717	0.936	1.155					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.081							
6.2	SERVICETEST				0.057							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.152							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											




FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	80						
	NOMINAL DIAMETER	INCH	3" / 3.500						
	OUTSIDE DIAMETER	MM	88.9						
	WALLTHICKNESS	MM	10.0	11.0	12.5	14.2	16.0	17.5	
	SCHEDULE	PN	<64	<161	>160				
1.1	PIPING IN FIELD		0.649	0.684	0.733	0.786	0.839	0.879	
1.2	PIPING ON PIPERACK		0.552	0.581	0.623	0.668	0.713	0.748	
1.3	PIPING DISMANTLING		0.195	0.205	0.220	0.236	0.252	0.264	
2.1	FITTING (1N) CONNECTION		0.253						
2.2	FITTING (2N) CONNECTIONS		0.411						
2.3	FITTING (3N) CONNECTIONS		0.505						
2.4	FLANGE		0.316	0.379	0.442				
3.1	CIRCUMFERENTIAL WELD		1.481	1.552	1.663	1.794	1.936	2.057	
3.2	FILLET WELD		0.889	0.931	0.998	1.076	1.162	1.234	
3.3	MITRE WELD		1.926	2.018	2.162	2.332	2.517	2.674	
3.4	BRANCH CONNECTION		2.370	2.484	2.661	2.870	3.097	3.291	
3.5	WELDOLET, NIPOLET		2.369						
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15						
	BRANCH - DN	15 121	1.464	1.541	1.662	1.806	1.966	2.104	
	DN	20 127	1.529	1.611	1.739	1.893	2.063	2.209	
	DN	25 134	1.606	1.693	1.830	1.993	2.175	2.332	
	DN	40 148	1.760	1.857	2.010	2.194	2.399	2.577	
	DN	50 160	1.892	1.998	2.165	2.367	2.591	2.787	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)									
3.7	WELDING GASKETS		2.026						
3.8	BACKINGRING (FOR ALUMINIUM ONLY)								
3.9	CUTTING FOR MODIFICATION		0.222	0.233	0.249	0.269	0.290	0.309	
4.1-4.3	FLANGE UNION		0.762	0.953	1.067				
4.4	SPECTACLE BLIND		0.152						
4.5	PIPE BENDING TO DN 6"/150		0.618						
4.6	PREPARATION OF THREADED ENDS		0.344						
4.7	SEALING OF THREADED CONNECTION		0.292						
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7								
5.1	VALVE INSTALLATION		0.915	1.118	1.322				
5.2	INSTALLATION OF ACTUATED VALVE		1.373	1.525	1.728				
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.632	0.689	0.775				
5.4	WAFER TYP VALVE INSTALLATION		0.320	0.360	0.400				
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		0.717	0.936	1.155				
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5								
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.081						
6.2	SERVICETEST		0.057						
7.1	NOZZLE REINFORCING BRACKETS		0.200						
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3						
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3						
7.4	EXCESS MATER. ON WELDING ROOTS		0.152						
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION								

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	100							
	NOMINAL DIAMETER			INCH	4" / 4.500							
	OUTSIDE DIAMETER			MM	114.3							
	WALLTHICKNESS			MM	2.0	2.3	2.6	2.9	3.2	3.6	4.0	4.5
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				0.345	0.364	0.383	0.401	0.419	0.443	0.466	0.495
1.2	PIPING ON PIPERACK				0.293	0.309	0.325	0.341	0.356	0.377	0.396	0.421
1.3	PIPING DISMANTLING				0.103	0.109	0.115	0.120	0.126	0.133	0.140	0.148
2.1	FITTING (1N) CONNECTION				0.314							
2.2	FITTING (2N) CONNECTIONS				0.510							
2.3	FITTING (3N) CONNECTIONS				0.628							
2.4	FLANGE				0.393	0.471	0.550					
3.1	CIRCUMFERENTIAL WELD				1.279	1.292	1.305	1.320	1.335	1.357	1.380	1.411
3.2	FILLET WELD				0.767	0.775	0.783	0.792	0.801	0.814	0.828	0.847
3.3	MITRE WELD				1.663	1.679	1.697	1.716	1.736	1.764	1.794	1.835
3.4	BRANCH CONNECTION				2.046	2.066	2.088	2.112	2.136	2.171	2.209	2.258
3.5	WELDOLET, NIPOLET				3.734							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	121	1.005	1.015	1.026	1.037	1.050	1.067	1.086	1.110	
	DN	20	127	1.046	1.056	1.068	1.080	1.093	1.111	1.131	1.157	
	DN	25	134	1.094	1.105	1.117	1.130	1.143	1.163	1.183	1.211	
	DN	40	148	1.189	1.201	1.215	1.229	1.244	1.266	1.289	1.319	
	DN	50	160	1.271	1.284	1.299	1.314	1.331	1.354	1.379	1.412	
	DN	80	189	1.469	1.485	1.502	1.520	1.540	1.567	1.597	1.636	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				2.485							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)											
3.9	CUTTING FOR MODIFICATION				0.192	0.194	0.196	0.198	0.200	0.204	0.207	0.212
4.1-4.3	FLANGE UNION				0.876	1.095	1.227					
4.4	SPECTACLE BLIND				0.175							
4.5	PIPE BENDING TO DN 6"/150				0.844							
4.6	PREPARATION OF THREADED ENDS				0.469							
4.7	SEALING OF THREADED CONNECTION				0.399							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				1.170	1.430	1.689					
5.2	INSTALLATION OF ACTUATED VALVE				1.754	1.949	2.209					
5.3	INST. OF ACTUATED WAFER TYP VALVE				0.816	0.890	1.001					
5.4	WAFER TYP VALVE INSTALLATION				0.422	0.475	0.528					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				0.819	1.038	1.257					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.095							
6.2	SERVICETEST				0.067							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.175							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	100							
	NOMINAL DIAMETER			INCH	4" / 4.500							
	OUTSIDE DIAMETER			MM	114.3							
	WALLTHICKNESS			MM	5.0	5.6	6.3	7.1	8.0	8.8	10.0	11.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				0.523	0.556	0.593	0.635	0.681	0.720	0.778	0.824
1.2	PIPING ON PIPERACK				0.444	0.472	0.504	0.540	0.578	0.612	0.661	0.700
1.3	PIPING DISMANTLING				0.157	0.167	0.178	0.190	0.204	0.216	0.233	0.247
2.1	FITTING (1N) CONNECTION				0.314							
2.2	FITTING (2N) CONNECTIONS				0.510							
2.3	FITTING (3N) CONNECTIONS				0.628							
2.4	FLANGE				0.393	0.471	0.550					
3.1	CIRCUMFERENTIAL WELD				1.444	1.485	1.537	1.599	1.674	1.743	1.853	1.949
3.2	FILLET WELD				0.866	0.891	0.922	0.960	1.004	1.046	1.112	1.170
3.3	MITRE WELD				1.877	1.931	1.998	2.079	2.176	2.267	2.409	2.534
3.4	BRANCH CONNECTION				2.310	2.377	2.459	2.559	2.678	2.790	2.965	3.119
3.5	WELDOLET, NIPOLET				3.734							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	121	1.136	1.169	1.211	1.260	1.320	1.376	1.464	1.541	
	DN	20	127	1.184	1.219	1.262	1.315	1.378	1.436	1.529	1.611	
	DN	25	134	1.240	1.277	1.323	1.378	1.445	1.508	1.606	1.693	
	DN	40	148	1.351	1.392	1.443	1.506	1.580	1.650	1.760	1.857	
	DN	50	160	1.447	1.492	1.547	1.615	1.695	1.771	1.892	1.998	
	DN	80	189	1.678	1.731	1.797	1.878	1.975	2.066	2.210	2.338	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				2.485							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)											
3.9	CUTTING FOR MODIFICATION				0.217	0.223	0.231	0.240	0.251	0.262	0.278	0.292
4.1-4.3	FLANGE UNION				0.876	1.095	1.227					
4.4	SPECTACLE BLIND				0.175							
4.5	PIPE BENDING TO DN 6"/150				0.844							
4.6	PREPARATION OF THREADED ENDS				0.469							
4.7	SEALING OF THREADED CONNECTION				0.399							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				1.170	1.430	1.689					
5.2	INSTALLATION OF ACTUATED VALVE				1.754	1.949	2.209					
5.3	INST. OF ACTUATED WAFER TYP VALVE				0.816	0.890	1.001					
5.4	WAFER TYP VALVE INSTALLATION				0.422	0.475	0.528					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				0.819	1.038	1.257					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.095							
6.2	SERVICETEST				0.067							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.175							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											





FACTORLIST PIPING - DIN


LindeEntityCode_ph-W-LX 2401


POS.	NOMINAL DIAMETER	MM	100					125		
	NOMINAL DIAMETER	INCH	4" / 4.500					5" / 5.563		
	OUTSIDE DIAMETER	MM	114.3					139.7		
	WALLTHICKNESS	MM	12.5	14.2	16.0	17.5	20.0	2.0	2.3	2.6
	SCHEDULE	PN	<64	<161	>160			<64	<161	>160
1.1	PIPING IN FIELD		0.891	0.963	1.036	1.094	1.184	0.374	0.397	0.420
1.2	PIPING ON PIPERACK		0.757	0.819	0.880	0.930	1.007	0.318	0.338	0.357
1.3	PIPING DISMANTLING		0.267	0.289	0.311	0.328	0.355	0.112	0.119	0.126
2.1	FITTING (1N) CONNECTION		0.314					0.391		
2.2	FITTING (2N) CONNECTIONS		0.510					0.635		
2.3	FITTING (3N) CONNECTIONS		0.628					0.781		
2.4	FLANGE		0.393	0.471	0.550			0.488	0.586	0.684
3.1	CIRCUMFERENTIAL WELD		2.100	2.280	2.479	2.650	2.943	1.510	1.526	1.542
3.2	FILLET WELD		1.260	1.368	1.487	1.590	1.766	0.906	0.915	0.925
3.3	MITRE WELD		2.731	2.964	3.222	3.444	3.826	1.963	1.983	2.005
3.4	BRANCH CONNECTION		3.361	3.648	3.966	4.239	4.708	2.416	2.441	2.468
3.5	WELDOLET, NIPOLET		3.734					4.485		
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15 121	1.662	1.806	1.966	2.104	2.342	1.005	1.015	1.026
	DN	20 127	1.739	1.893	2.063	2.209	2.463	1.046	1.056	1.068
	DN	25 134	1.830	1.993	2.175	2.332	2.603	1.094	1.105	1.117
	DN	40 148	2.010	2.194	2.399	2.577	2.885	1.189	1.201	1.215
	DN	50 160	2.165	2.367	2.591	2.787	3.127	1.271	1.284	1.299
	DN	80 189	2.540	2.783	3.056	3.294	3.710	1.469	1.485	1.502
	DN	100 214						1.639	1.657	1.677
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)										
3.7	WELDING GASKETS		2.485					2.943		
3.8	BACKINGRING (FOR ALUMINIUM ONLY)							0.193		
3.9	CUTTING FOR MODIFICATION		0.315	0.342	0.372	0.397	0.441	0.226	0.229	0.231
4.1-4.3	FLANGE UNION		0.876	1.095	1.227			1.029	1.286	1.440
4.4	SPECTACLE BLIND		0.175					0.206		
4.5	PIPE BENDING TO DN 6"/150		0.844					1.185		
4.6	PREPARATION OF THREADED ENDS		0.469					0.658		
4.7	SEALING OF THREADED CONNECTION		0.399					0.559		
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7									
5.1	VALVE INSTALLATION		1.170	1.430	1.689			1.495	1.827	2.159
5.2	INSTALLATION OF ACTUATED VALVE		1.754	1.949	2.209			2.243	2.492	2.824
5.3	INST. OF ACTUATED WAFER TYP VALVE		0.816	0.890	1.001			1.053	1.149	1.292
5.4	WAFER TYP VALVE INSTALLATION		0.422	0.475	0.528			0.558	0.628	0.698
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		0.819	1.038	1.257			0.947	1.166	1.385
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5									
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.095					0.113		
6.2	SERVICETEST		0.067					0.079		
7.1	NOZZLE REINFORCING BRACKETS		0.200					0.200		
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS		0.175					0.206		
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION									


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	125							
	NOMINAL DIAMETER			INCH	5" / 5.563							
	OUTSIDE DIAMETER			MM	139.7							
	WALLTHICKNESS			MM	2.9	3.2	3.6	4.0	4.5	5.0	5.6	6.3
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				0.442	0.464	0.493	0.521	0.556	0.590	0.630	0.675
1.2	PIPING ON PIPERACK				0.376	0.394	0.419	0.443	0.472	0.501	0.535	0.574
1.3	PIPING DISMANTLING				0.133	0.139	0.148	0.156	0.167	0.177	0.189	0.203
2.1	FITTING (1N) CONNECTION				0.391							
2.2	FITTING (2N) CONNECTIONS				0.635							
2.3	FITTING (3N) CONNECTIONS				0.781							
2.4	FLANGE				0.488	0.586	0.684					
3.1	CIRCUMFERENTIAL WELD				1.560	1.579	1.606	1.635	1.673	1.714	1.765	1.829
3.2	FILLET WELD				0.936	0.948	0.964	0.981	1.004	1.028	1.059	1.098
3.3	MITRE WELD				2.028	2.053	2.088	2.125	2.175	2.228	2.295	2.378
3.4	BRANCH CONNECTION				2.496	2.527	2.570	2.616	2.677	2.742	2.824	2.927
3.5	WELDOLET, NIPOLET				4.485							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	121	1.037	1.050	1.067	1.086	1.110	1.136	1.169	1.211	
	DN	20	127	1.080	1.093	1.111	1.131	1.157	1.184	1.219	1.262	
	DN	25	134	1.130	1.143	1.163	1.183	1.211	1.240	1.277	1.323	
	DN	40	148	1.229	1.244	1.266	1.289	1.319	1.351	1.392	1.443	
	DN	50	160	1.314	1.331	1.354	1.379	1.412	1.447	1.492	1.547	
	DN	80	189	1.520	1.540	1.567	1.597	1.636	1.678	1.731	1.797	
	DN	100	214	1.698	1.720	1.751	1.785	1.829	1.877	1.938	2.013	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				2.943							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.193							
3.9	CUTTING FOR MODIFICATION				0.234	0.237	0.241	0.245	0.251	0.257	0.265	0.274
4.1-4.3	FLANGE UNION				1.029	1.286	1.440					
4.4	SPECTACLE BLIND				0.206							
4.5	PIPE BENDING TO DN 6"/150				1.185							
4.6	PREPARATION OF THREADED ENDS				0.658							
4.7	SEALING OF THREADED CONNECTION				0.559							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				1.495	1.827	2.159					
5.2	INSTALLATION OF ACTUATED VALVE				2.243	2.492	2.824					
5.3	INST. OF ACTUATED WAFER TYP VALVE				1.053	1.149	1.292					
5.4	WAFER TYP VALVE INSTALLATION				0.558	0.628	0.698					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				0.947	1.166	1.385					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.113							
6.2	SERVICETEST				0.079							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.206							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	125							
	NOMINAL DIAMETER			INCH	5" / 5.563							
	OUTSIDE DIAMETER			MM	139.7							
	WALLTHICKNESS			MM	7.1	8.0	8.8	10.0	11.0	12.5	14.2	16.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				0.727	0.783	0.832	0.903	0.960	1.044	1.135	1.228
1.2	PIPING ON PIPERACK				0.618	0.665	0.707	0.767	0.816	0.887	0.965	1.044
1.3	PIPING DISMANTLING				0.218	0.235	0.249	0.271	0.288	0.313	0.341	0.368
2.1	FITTING (1N) CONNECTION				0.391							
2.2	FITTING (2N) CONNECTIONS				0.635							
2.3	FITTING (3N) CONNECTIONS				0.781							
2.4	FLANGE				0.488	0.586	0.684					
3.1	CIRCUMFERENTIAL WELD				1.907	2.000	2.087	2.225	2.346	2.538	2.767	3.021
3.2	FILLET WELD				1.144	1.200	1.252	1.335	1.408	1.523	1.660	1.813
3.3	MITRE WELD				2.479	2.600	2.713	2.893	3.050	3.299	3.597	3.928
3.4	BRANCH CONNECTION				3.051	3.200	3.339	3.560	3.754	4.060	4.427	4.834
3.5	WELDOLET, NIPOLET				4.485							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN			15 121	1.260	1.320	1.376	1.464	1.541	1.662	1.806	1.966
	DN			20 127	1.315	1.378	1.436	1.529	1.611	1.739	1.893	2.063
	DN			25 134	1.378	1.445	1.508	1.606	1.693	1.830	1.993	2.175
	DN			40 148	1.506	1.580	1.650	1.760	1.857	2.010	2.194	2.399
	DN			50 160	1.615	1.695	1.771	1.892	1.998	2.165	2.367	2.591
	DN			80 189	1.878	1.975	2.066	2.210	2.338	2.540	2.783	3.056
	DN			100 214	2.105	2.215	2.319	2.485	2.631	2.863	3.142	3.457
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				2.943							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.193							
3.9	CUTTING FOR MODIFICATION				0.286	0.300	0.313	0.334	0.352	0.381	0.415	0.453
4.1-4.3	FLANGE UNION				1.029	1.286	1.440					
4.4	SPECTACLE BLIND				0.206							
4.5	PIPE BENDING TO DN 6"/150				1.185							
4.6	PREPARATION OF THREADED ENDS				0.658							
4.7	SEALING OF THREADED CONNECTION				0.559							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				1.495	1.827	2.159					
5.2	INSTALLATION OF ACTUATED VALVE				2.243	2.492	2.824					
5.3	INST. OF ACTUATED WAFER TYP VALVE				1.053	1.149	1.292					
5.4	WAFER TYP VALVE INSTALLATION				0.558	0.628	0.698					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				0.947	1.166	1.385					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.113							
6.2	SERVICETEST				0.079							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.206							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	150							
	NOMINAL DIAMETER			INCH	6" / 6.625							
	OUTSIDE DIAMETER			MM	168.3							
	WALLTHICKNESS			MM	2.9	3.2	3.6	4.0	4.5	5.0	5.6	6.3
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				0.487	0.513	0.547	0.581	0.623	0.663	0.711	0.766
1.2	PIPING ON PIPERACK				0.414	0.436	0.465	0.494	0.529	0.564	0.605	0.651
1.3	PIPING DISMANTLING				0.146	0.154	0.164	0.174	0.187	0.199	0.213	0.230
2.1	FITTING (1N) CONNECTION				0.467							
2.2	FITTING (2N) CONNECTIONS				0.759							
2.3	FITTING (3N) CONNECTIONS				0.935							
2.4	FLANGE				0.584	0.701	0.818					
3.1	CIRCUMFERENTIAL WELD				1.831	1.854	1.887	1.922	1.968	2.017	2.080	2.158
3.2	FILLET WELD				1.099	1.112	1.132	1.153	1.181	1.210	1.248	1.295
3.3	MITRE WELD				2.380	2.410	2.453	2.498	2.558	2.623	2.704	2.806
3.4	BRANCH CONNECTION				2.930	2.967	3.019	3.075	3.149	3.228	3.328	3.453
3.5	WELDOLET, NIPOLET				5.331							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	121	1.037	1.050	1.067	1.086	1.110	1.136	1.169	1.211	
		DN	20	127	1.080	1.093	1.111	1.131	1.157	1.184	1.219	1.262
		DN	25	134	1.130	1.143	1.163	1.183	1.211	1.240	1.277	1.323
		DN	40	148	1.229	1.244	1.266	1.289	1.319	1.351	1.392	1.443
		DN	50	160	1.314	1.331	1.354	1.379	1.412	1.447	1.492	1.547
		DN	80	189	1.520	1.540	1.567	1.597	1.636	1.678	1.731	1.797
		DN	100	214	1.698	1.720	1.751	1.785	1.829	1.877	1.938	2.013
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				3.459							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.226							
3.9	CUTTING FOR MODIFICATION				0.275	0.278	0.283	0.288	0.295	0.303	0.312	0.324
4.1-4.3	FLANGE UNION				1.191	1.489	1.667					
4.4	SPECTACLE BLIND				0.238							
4.5	PIPE BENDING TO DN 6"/150				1.590							
4.6	PREPARATION OF THREADED ENDS				0.883							
4.7	SEALING OF THREADED CONNECTION				0.751							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				1.827	2.233	2.639					
5.2	INSTALLATION OF ACTUATED VALVE				2.741	3.045	3.451					
5.3	INST. OF ACTUATED WAFER TYP VALVE				1.297	1.415	1.592					
5.4	WAFER TYP VALVE INSTALLATION				0.701	0.789	0.877					
5.5	SPINDLE EXTENSION			LENGTH - 1/2/3 MET.	1.074	1.293	1.512					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.130							
6.2	SERVICETEST				0.091							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.238							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	150							
	NOMINAL DIAMETER			INCH	6" / 6.625							
	OUTSIDE DIAMETER			MM	168.3							
	WALLTHICKNESS			MM	7.1	8.0	8.8	10.0	12.5	14.2	17.5	20.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				0.828	0.896	0.954	1.041	1.213	1.325	1.532	1.679
1.2	PIPING ON PIPERACK				0.704	0.761	0.811	0.885	1.031	1.126	1.302	1.427
1.3	PIPING DISMANTLING				0.248	0.269	0.286	0.312	0.364	0.398	0.459	0.504
2.1	FITTING (1N) CONNECTION				0.467							
2.2	FITTING (2N) CONNECTIONS				0.759							
2.3	FITTING (3N) CONNECTIONS				0.935							
2.4	FLANGE				0.584	0.701	0.818					
3.1	CIRCUMFERENTIAL WELD				2.253	2.367	2.474	2.644	3.030	3.314	3.909	4.391
3.2	FILLET WELD				1.352	1.420	1.484	1.586	1.818	1.989	2.346	2.635
3.3	MITRE WELD				2.929	3.077	3.216	3.437	3.939	4.309	5.082	5.709
3.4	BRANCH CONNECTION				3.605	3.787	3.959	4.230	4.848	5.303	6.255	7.026
3.5	WELDOLET, NIPOLET				5.331							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN			15 121	1.260	1.320	1.376	1.464	1.662	1.806	2.104	2.342
	DN			20 127	1.315	1.378	1.436	1.529	1.739	1.893	2.209	2.463
	DN			25 134	1.378	1.445	1.508	1.606	1.830	1.993	2.332	2.603
	DN			40 148	1.506	1.580	1.650	1.760	2.010	2.194	2.577	2.885
	DN			50 160	1.615	1.695	1.771	1.892	2.165	2.367	2.787	3.127
	DN			80 189	1.878	1.975	2.066	2.210	2.540	2.783	3.294	3.710
	DN			100 214	2.105	2.215	2.319	2.485	2.863	3.142	3.732	4.213
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				3.459							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.226							
3.9	CUTTING FOR MODIFICATION				0.338	0.355	0.371	0.397	0.455	0.497	0.586	0.659
4.1-4.3	FLANGE UNION				1.191	1.489	1.667					
4.4	SPECTACLE BLIND				0.238							
4.5	PIPE BENDING TO DN 6"/150				1.590							
4.6	PREPARATION OF THREADED ENDS				0.883							
4.7	SEALING OF THREADED CONNECTION				0.751							
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				1.827	2.233	2.639					
5.2	INSTALLATION OF ACTUATED VALVE				2.741	3.045	3.451					
5.3	INST. OF ACTUATED WAFER TYP VALVE				1.297	1.415	1.592					
5.4	WAFER TYP VALVE INSTALLATION				0.701	0.789	0.877					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				1.074	1.293	1.512					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.130							
6.2	SERVICETEST				0.091							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.238							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	200							
	NOMINAL DIAMETER			INCH	8" / 8.625							
	OUTSIDE DIAMETER			MM	219.1							
	WALLTHICKNESS			MM	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				0.599	0.642	0.686	0.739	0.791	0.853	0.924	1.003
1.2	PIPING ON PIPERACK				0.509	0.546	0.583	0.628	0.673	0.725	0.785	0.853
1.3	PIPING DISMANTLING				0.180	0.193	0.206	0.222	0.237	0.256	0.277	0.301
2.1	FITTING (1N) CONNECTION				0.621							
2.2	FITTING (2N) CONNECTIONS				1.009							
2.3	FITTING (3N) CONNECTIONS				1.241							
2.4	FLANGE				0.776	0.931	1.086					
3.1	CIRCUMFERENTIAL WELD				2.342	2.385	2.431	2.492	2.557	2.640	2.743	2.868
3.2	FILLET WELD				1.405	1.431	1.459	1.495	1.534	1.584	1.646	1.721
3.3	MITRE WELD				3.045	3.101	3.160	3.239	3.324	3.431	3.565	3.729
3.4	BRANCH CONNECTION				3.748	3.816	3.889	3.987	4.091	4.223	4.388	4.589
3.5	WELDOLET, NIPOLET				6.832							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	123	1.064	1.082	1.101	1.126	1.152	1.186	1.228	1.279	
	DN	20	129	1.107	1.126	1.146	1.172	1.200	1.236	1.280	1.333	
	DN	25	135	1.151	1.170	1.191	1.218	1.248	1.285	1.331	1.388	
	DN	40	150	1.259	1.280	1.304	1.334	1.367	1.409	1.461	1.524	
	DN	50	162	1.345	1.369	1.394	1.427	1.463	1.508	1.564	1.633	
	DN	80	191	1.554	1.582	1.612	1.652	1.694	1.748	1.815	1.896	
	DN	100	216	1.734	1.766	1.800	1.845	1.893	1.954	2.030	2.123	
	DN	150	270	2.124	2.163	2.206	2.263	2.323	2.400	2.496	2.614	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				4.376							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.291							
3.9	CUTTING FOR MODIFICATION				0.351	0.358	0.365	0.374	0.384	0.396	0.411	0.430
4.1-4.3	FLANGE UNION				1.539	1.924	2.155					
4.4	SPECTACLE BLIND				0.308							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				2.507	3.064	3.621					
5.2	INSTALLATION OF ACTUATED VALVE				3.761	4.179	4.736					
5.3	INST. OF ACTUATED WAFER TYP VALVE				1.803	1.967	2.213					
5.4	WAFER TYP VALVE INSTALLATION				1.005	1.130	1.256					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				1.329	1.548	1.767					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.165							
6.2	SERVICETEST				0.116							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.308							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	200							
	NOMINAL DIAMETER			INCH	8" / 8.625							
	OUTSIDE DIAMETER			MM	219.1							
	WALLTHICKNESS			MM	8.0	8.8	10.0	11.0	12.5	14.2	17.5	20.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				1.091	1.168	1.280	1.372	1.506	1.654	1.929	2.128
1.2	PIPING ON PIPERACK				0.927	0.992	1.088	1.166	1.280	1.406	1.640	1.809
1.3	PIPING DISMANTLING				0.327	0.350	0.384	0.411	0.452	0.496	0.579	0.639
2.1	FITTING (1N) CONNECTION				0.621							
2.2	FITTING (2N) CONNECTIONS				1.009							
2.3	FITTING (3N) CONNECTIONS				1.241							
2.4	FLANGE				0.776	0.931	1.086					
3.1	CIRCUMFERENTIAL WELD				3.019	3.161	3.388	3.587	3.905	4.288	5.094	5.754
3.2	FILLET WELD				1.812	1.897	2.033	2.152	2.343	2.573	3.057	3.453
3.3	MITRE WELD				3.925	4.110	4.404	4.664	5.076	5.574	6.623	7.481
3.4	BRANCH CONNECTION				4.831	5.058	5.420	5.740	6.247	6.860	8.151	9.207
3.5	WELDOLET, NIPOLET				6.832							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	123	1.339	1.396	1.486	1.564	1.688	1.835	2.139	2.382	
	DN	20	129	1.397	1.457	1.551	1.634	1.765	1.921	2.244	2.503	
	DN	25	135	1.455	1.518	1.617	1.705	1.843	2.007	2.349	2.624	
	DN	40	150	1.599	1.670	1.782	1.881	2.036	2.223	2.612	2.925	
	DN	50	162	1.715	1.792	1.914	2.021	2.191	2.395	2.822	3.167	
	DN	80	191	1.994	2.086	2.232	2.361	2.566	2.812	3.329	3.750	
	DN	100	216	2.235	2.340	2.507	2.654	2.888	3.171	3.767	4.253	
	DN	150	270	2.755	2.888	3.100	3.287	3.586	3.947	4.711	5.340	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				4.376							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.291							
3.9	CUTTING FOR MODIFICATION				0.453	0.474	0.508	0.538	0.586	0.643	0.764	0.863
4.1-4.3	FLANGE UNION				1.539	1.924	2.155					
4.4	SPECTACLE BLIND				0.308							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				2.507	3.064	3.621					
5.2	INSTALLATION OF ACTUATED VALVE				3.761	4.179	4.736					
5.3	INST. OF ACTUATED WAFER TYP VALVE				1.803	1.967	2.213					
5.4	WAFER TYP VALVE INSTALLATION				1.005	1.130	1.256					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				1.329	1.548	1.767					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.165							
6.2	SERVICETEST				0.116							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.308							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	250							
	NOMINAL DIAMETER			INCH	10" / 10.750							
	OUTSIDE DIAMETER			MM	273.0							
	WALLTHICKNESS			MM	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD			0.687	0.741	0.794	0.859	0.924	1.000	1.087	1.185	
1.2	PIPING ON PIPERACK			0.584	0.630	0.675	0.730	0.785	0.850	0.924	1.007	
1.3	PIPING DISMANTLING			0.206	0.222	0.238	0.258	0.277	0.300	0.326	0.356	
2.1	FITTING (1N) CONNECTION			0.774								
2.2	FITTING (2N) CONNECTIONS			1.258								
2.3	FITTING (3N) CONNECTIONS			1.548								
2.4	FLANGE			0.968	1.161	1.355						
3.1	CIRCUMFERENTIAL WELD			2.860	2.914	2.971	3.048	3.129	3.233	3.363	3.521	
3.2	FILLET WELD			1.716	1.748	1.783	1.829	1.877	1.940	2.018	2.113	
3.3	MITRE WELD			3.718	3.788	3.863	3.962	4.068	4.203	4.372	4.577	
3.4	BRANCH CONNECTION			4.576	4.662	4.754	4.876	5.007	5.173	5.380	5.634	
3.5	WELDOLET, NIPOLET			8.425								
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN			15 143	1.208	1.229	1.251	1.280	1.311	1.351	1.400	1.460
	DN			20 148	1.244	1.266	1.289	1.319	1.351	1.392	1.443	1.506
	DN			25 155	1.295	1.317	1.341	1.373	1.407	1.450	1.504	1.569
	DN			40 170	1.403	1.428	1.454	1.489	1.527	1.574	1.633	1.705
	DN			50 182	1.489	1.516	1.544	1.582	1.622	1.673	1.737	1.814
	DN			80 210	1.691	1.722	1.755	1.799	1.845	1.905	1.978	2.069
	DN			100 236	1.878	1.913	1.950	2.000	2.052	2.119	2.203	2.305
	DN			150 290	2.268	2.311	2.356	2.417	2.482	2.565	2.669	2.795
	DN			200 340	2.628	2.678	2.732	2.804	2.880	2.978	3.100	3.249
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS			5.348								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			0.356								
3.9	CUTTING FOR MODIFICATION			0.429	0.437	0.446	0.457	0.469	0.485	0.504	0.528	
4.1-4.3	FLANGE UNION			1.915	2.394	2.681						
4.4	SPECTACLE BLIND			0.383								
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION			3.205	3.917	4.629						
5.2	INSTALLATION OF ACTUATED VALVE			4.807	5.341	6.053						
5.3	INST. OF ACTUATED WAFER TYP VALVE			2.328	2.540	2.858						
5.4	WAFER TYP VALVE INSTALLATION			1.328	1.494	1.660						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			1.584	1.803	2.022						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.			0.200								
6.2	SERVICETEST			0.140								
7.1	NOZZLE REINFORCING BRACKETS			0.200								
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS			0.383								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	250							
	NOMINAL DIAMETER			INCH	10" / 10.750							
	OUTSIDE DIAMETER			MM	273.0							
	WALLTHICKNESS			MM	8.0	8.8	10.0	11.0	12.5	14.2	17.5	20.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				1.293	1.388	1.528	1.642	1.809	1.994	2.340	2.592
1.2	PIPING ON PIPERACK				1.099	1.180	1.298	1.395	1.538	1.695	1.989	2.204
1.3	PIPING DISMANTLING				0.388	0.416	0.458	0.492	0.543	0.598	0.702	0.778
2.1	FITTING (1N) CONNECTION				0.774							
2.2	FITTING (2N) CONNECTIONS				1.258							
2.3	FITTING (3N) CONNECTIONS				1.548							
2.4	FLANGE				0.968	1.161	1.355					
3.1	CIRCUMFERENTIAL WELD				3.711	3.891	4.177	4.430	4.832	5.320	6.352	7.200
3.2	FILLET WELD				2.227	2.334	2.506	2.658	2.899	3.192	3.811	4.320
3.3	MITRE WELD				4.825	5.058	5.430	5.759	6.282	6.916	8.258	9.361
3.4	BRANCH CONNECTION				5.938	6.225	6.683	7.088	7.732	8.512	10.163	11.521
3.5	WELDOLET, NIPOLET				8.425							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	10	143	1.532	1.599	1.705	1.798	1.946	2.122	2.489	2.785	
	DN	20	148	1.580	1.650	1.760	1.857	2.010	2.194	2.577	2.885	
	DN	25	155	1.647	1.721	1.837	1.939	2.101	2.295	2.699	3.026	
	DN	40	170	1.792	1.873	2.002	2.115	2.294	2.510	2.962	3.328	
	DN	50	182	1.907	1.995	2.133	2.256	2.449	2.683	3.172	3.569	
	DN	80	210	2.177	2.279	2.441	2.584	2.811	3.085	3.662	4.133	
	DN	100	236	2.427	2.543	2.726	2.889	3.147	3.458	4.117	4.656	
	DN	150	290	2.947	3.091	3.319	3.522	3.844	4.234	5.061	5.742	
	DN	200	340	3.429	3.598	3.868	4.108	4.489	4.953	5.936	6.748	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				5.348							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.356							
3.9	CUTTING FOR MODIFICATION				0.557	0.584	0.627	0.664	0.725	0.798	0.953	1.080
4.1-4.3	FLANGE UNION				1.915	2.394	2.681					
4.4	SPECTACLE BLIND				0.383							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				3.205	3.917	4.629					
5.2	INSTALLATION OF ACTUATED VALVE				4.807	5.341	6.053					
5.3	INST. OF ACTUATED WAFER TYP VALVE				2.328	2.540	2.858					
5.4	WAFER TYP VALVE INSTALLATION				1.328	1.494	1.660					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				1.584	1.803	2.022					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.200							
6.2	SERVICETEST				0.140							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.383							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	300							
	NOMINAL DIAMETER			INCH	12" / 12.750							
	OUTSIDE DIAMETER			MM	323.9							
	WALLTHICKNESS			MM	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD			0.769	0.832	0.894	0.971	1.046	1.135	1.238	1.353	
1.2	PIPING ON PIPERACK			0.654	0.707	0.760	0.825	0.889	0.965	1.052	1.150	
1.3	PIPING DISMANTLING			0.231	0.250	0.268	0.291	0.314	0.341	0.371	0.406	
2.1	FITTING (1N) CONNECTION			0.927								
2.2	FITTING (2N) CONNECTIONS			1.507								
2.3	FITTING (3N) CONNECTIONS			1.855								
2.4	FLANGE			1.159	1.391	1.623						
3.1	CIRCUMFERENTIAL WELD			3.349	3.413	3.482	3.573	3.670	3.794	3.948	4.137	
3.2	FILLET WELD			2.010	2.048	2.089	2.144	2.202	2.276	2.369	2.482	
3.3	MITRE WELD			4.354	4.437	4.526	4.644	4.771	4.932	5.133	5.379	
3.4	BRANCH CONNECTION			5.359	5.461	5.570	5.716	5.871	6.070	6.317	6.620	
3.5	WELDOLET, NIPOLET			9.930								
3.6	REINFORCEMENT PAD RING/OUTSIDE			ACC. TO LS 433-15								
	BRANCH - DN	15	168	1.388	1.413	1.439	1.474	1.511	1.558	1.616	1.687	
	DN	20	173	1.424	1.450	1.477	1.512	1.550	1.599	1.659	1.733	
	DN	25	180	1.475	1.501	1.529	1.567	1.606	1.657	1.720	1.796	
	DN	40	195	1.583	1.612	1.642	1.683	1.726	1.781	1.849	1.932	
	DN	50	207	1.669	1.700	1.732	1.775	1.821	1.880	1.953	2.041	
	DN	80	235	1.871	1.906	1.943	1.992	2.044	2.111	2.194	2.296	
	DN	100	261	2.059	2.097	2.138	2.193	2.251	2.326	2.419	2.532	
	DN	150	315	2.448	2.494	2.544	2.611	2.681	2.772	2.884	3.022	
	DN	200	366	2.815	2.870	2.928	3.005	3.088	3.193	3.325	3.485	
	DN	250	419	3.197	3.260	3.326	3.415	3.510	3.631	3.782	3.967	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS			6.267								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			0.421								
3.9	CUTTING FOR MODIFICATION			0.502	0.512	0.522	0.536	0.550	0.569	0.592	0.621	
4.1-4.3	FLANGE UNION			2.314	2.893	3.240						
4.4	SPECTACLE BLIND			0.463								
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION			3.916	4.787	5.657						
5.2	INSTALLATION OF ACTUATED VALVE			5.875	6.527	7.398						
5.3	INST. OF ACTUATED WAFER TYP VALVE			2.869	3.130	3.521						
5.4	WAFER TYP VALVE INSTALLATION			1.668	1.876	2.085						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			1.839	2.058	2.277						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.			0.235								
6.2	SERVICETEST			0.165								
7.1	NOZZLE REINFORCING BRACKETS			0.200								
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS			0.463								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	300							
	NOMINAL DIAMETER			INCH	12" / 12.750							
	OUTSIDE DIAMETER			MM	323.9							
	WALLTHICKNESS			MM	8.0	8.8	10.0	11.0	12.5	14.2	17.5	20.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD			1.481	1.592	1.757	1.891	2.089	2.309	2.721	3.022	
1.2	PIPING ON PIPERACK			1.259	1.353	1.493	1.608	1.776	1.962	2.312	2.568	
1.3	PIPING DISMANTLING			0.444	0.478	0.527	0.567	0.627	0.693	0.816	0.906	
2.1	FITTING (1N) CONNECTION			0.927								
2.2	FITTING (2N) CONNECTIONS			1.507								
2.3	FITTING (3N) CONNECTIONS			1.855								
2.4	FLANGE			1.159	1.391	1.623						
3.1	CIRCUMFERENTIAL WELD			4.365	4.579	4.922	5.225	5.709	6.295	7.539	8.566	
3.2	FILLET WELD			2.619	2.748	2.953	3.135	3.425	3.777	4.524	5.140	
3.3	MITRE WELD			5.674	5.953	6.398	6.793	7.421	8.184	9.801	11.136	
3.4	BRANCH CONNECTION			6.984	7.327	7.875	8.360	9.134	10.072	12.063	13.706	
3.5	WELDOLET, NIPOLET			9.930								
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN			15 168	1.772	1.853	1.980	2.092	2.269	2.482	2.927	3.288
	DN			20 173	1.821	1.903	2.035	2.150	2.333	2.553	3.014	3.388
	DN			25 180	1.888	1.974	2.111	2.232	2.424	2.654	3.137	3.529
	DN			40 195	2.032	2.127	2.276	2.408	2.617	2.869	3.399	3.831
	DN			50 207	2.148	2.248	2.408	2.549	2.772	3.042	3.609	4.072
	DN			80 235	2.418	2.532	2.715	2.877	3.134	3.444	4.099	4.636
	DN			100 261	2.668	2.796	3.001	3.182	3.469	3.818	4.554	5.159
	DN			150 315	3.188	3.344	3.594	3.815	4.167	4.593	5.499	6.245
	DN			200 366	3.679	3.862	4.154	4.412	4.825	5.326	6.391	7.272
	DN			250 419	4.189	4.400	4.736	5.034	5.509	6.087	7.319	8.338
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS			6.267								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			0.421								
3.9	CUTTING FOR MODIFICATION			0.655	0.687	0.738	0.784	0.856	0.944	1.131	1.285	
4.1-4.3	FLANGE UNION			2.314	2.893	3.240						
4.4	SPECTACLE BLIND			0.463								
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION			3.916	4.787	5.657						
5.2	INSTALLATION OF ACTUATED VALVE			5.875	6.527	7.398						
5.3	INST. OF ACTUATED WAFER TYP VALVE			2.869	3.130	3.521						
5.4	WAFER TYP VALVE INSTALLATION			1.668	1.876	2.085						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			1.839	2.058	2.277						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.			0.235								
6.2	SERVICETEST			0.165								
7.1	NOZZLE REINFORCING BRACKETS			0.200								
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS			0.463								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401


POS.	NOMINAL DIAMETER	MM	350								
	NOMINAL DIAMETER	INCH	14" / 14.000								
	OUTSIDE DIAMETER	MM	355.6								
	WALLTHICKNESS	MM	3.2	3.6	4.0	4.5	5.0	5.6	6.3	7.1	
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		0.820	0.888	0.956	1.039	1.122	1.219	1.331	1.457	
1.2	PIPING ON PIPERACK		0.697	0.755	0.812	0.883	0.953	1.036	1.131	1.238	
1.3	PIPING DISMANTLING		0.246	0.266	0.287	0.312	0.336	0.366	0.399	0.437	
2.1	FITTING (1N) CONNECTION		1.081								
2.2	FITTING (2N) CONNECTIONS		1.756								
2.3	FITTING (3N) CONNECTIONS		2.161								
2.4	FLANGE		1.351	1.621	1.891						
3.1	CIRCUMFERENTIAL WELD		3.654	3.724	3.799	3.899	4.006	4.143	4.313	4.521	
3.2	FILLET WELD		2.192	2.235	2.280	2.340	2.404	2.486	2.588	2.713	
3.3	MITRE WELD		4.750	4.842	4.939	5.069	5.208	5.386	5.607	5.878	
3.4	BRANCH CONNECTION		5.846	5.959	6.079	6.239	6.410	6.629	6.901	7.234	
3.5	WELDOLET, NIPOLET		10.867								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		6.839								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)		0.487								
3.9	CUTTING FOR MODIFICATION		0.548	0.559	0.570	0.585	0.601	0.621	0.647	0.678	
4.1-4.3	FLANGE UNION		2.734	3.417	3.827						
4.4	SPECTACLE BLIND		0.547								
4.5	PIPE BENDING TO DN 6"/150										
4.6	PREPARATION OF THREADED ENDS										
4.7	SEALING OF THREADED CONNECTION										
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		4.640	5.671	6.702						
5.2	INSTALLATION OF ACTUATED VALVE		6.960	7.733	8.765						
5.3	INST. OF ACTUATED WAFER TYP VALVE		3.423	3.734	4.201						
5.4	WAFER TYP VALVE INSTALLATION		2.022	2.275	2.528						
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	2.094	2.313	2.532						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.270								
6.2	SERVICETEST		0.189								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.547								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										




FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	350								
	NOMINAL DIAMETER	INCH	14" / 14.000								
	OUTSIDE DIAMETER	MM	355.6								
	WALLTHICKNESS	MM	8.0	8.8	10.0	11.0	12.5	14.2	17.5	20.0	
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		1.596	1.718	1.898	2.045	2.262	2.502	2.954	3.285	
1.2	PIPING ON PIPERACK		1.357	1.460	1.613	1.738	1.922	2.127	2.511	2.792	
1.3	PIPING DISMANTLING		0.479	0.515	0.569	0.613	0.678	0.751	0.886	0.986	
2.1	FITTING (1N) CONNECTION		1.081								
2.2	FITTING (2N) CONNECTIONS		1.756								
2.3	FITTING (3N) CONNECTIONS		2.161								
2.4	FLANGE		1.351	1.621	1.891						
3.1	CIRCUMFERENTIAL WELD		4.772	5.008	5.386	5.721	6.254	6.902	8.279	9.416	
3.2	FILLET WELD		2.863	3.005	3.232	3.432	3.753	4.141	4.967	5.650	
3.3	MITRE WELD		6.203	6.511	7.002	7.437	8.131	8.973	10.763	12.241	
3.4	BRANCH CONNECTION		7.635	8.013	8.618	9.153	10.007	11.044	13.246	15.066	
3.5	WELDOLET, NIPOLET		10.867								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		6.839								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)		0.487								
3.9	CUTTING FOR MODIFICATION		0.716	0.751	0.808	0.858	0.938	1.035	1.242	1.412	
4.1-4.3	FLANGE UNION		2.734	3.417	3.827						
4.4	SPECTACLE BLIND		0.547								
4.5	PIPE BENDING TO DN 6"/150										
4.6	PREPARATION OF THREADED ENDS										
4.7	SEALING OF THREADED CONNECTION										
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		4.640	5.671	6.702						
5.2	INSTALLATION OF ACTUATED VALVE		6.960	7.733	8.765						
5.3	INST. OF ACTUATED WAFER TYP VALVE		3.423	3.734	4.201						
5.4	WAFER TYP VALVE INSTALLATION		2.022	2.275	2.528						
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	2.094	2.313	2.532						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.270								
6.2	SERVICETEST		0.189								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.547								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	400							
	NOMINAL DIAMETER			INCH	16" / 16.000							
	OUTSIDE DIAMETER			MM	406.4							
	WALLTHICKNESS			MM	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				0.977	1.053	1.148	1.241	1.351	1.478	1.620	1.778
1.2	PIPING ON PIPERACK				0.830	0.895	0.976	1.055	1.148	1.256	1.377	1.511
1.3	PIPING DISMANTLING				0.293	0.316	0.344	0.372	0.405	0.443	0.486	0.533
2.1	FITTING (1N) CONNECTION				1.234							
2.2	FITTING (2N) CONNECTIONS				2.005							
2.3	FITTING (3N) CONNECTIONS				2.468							
2.4	FLANGE				1.543	1.851	2.160					
3.1	CIRCUMFERENTIAL WELD				4.223	4.309	4.423	4.546	4.702	4.898	5.136	5.424
3.2	FILLET WELD				2.534	2.585	2.654	2.727	2.821	2.939	3.082	3.254
3.3	MITRE WELD				5.489	5.601	5.750	5.910	6.113	6.367	6.677	7.051
3.4	BRANCH CONNECTION				6.756	6.894	7.077	7.273	7.524	7.836	8.218	8.678
3.5	WELDOLET, NIPOLET				12.369							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	206	1.693	1.725	1.768	1.813	1.872	1.944	2.032	2.138	
	DN	20	212	1.737	1.770	1.814	1.861	1.921	1.996	2.087	2.196	
	DN	25	218	1.781	1.815	1.860	1.909	1.971	2.048	2.141	2.254	
	DN	40	233	1.891	1.928	1.976	2.028	2.095	2.177	2.278	2.398	
	DN	50	245	1.979	2.018	2.069	2.124	2.194	2.280	2.386	2.514	
	DN	80	274	2.193	2.236	2.294	2.355	2.433	2.531	2.650	2.793	
	DN	100	299	2.377	2.424	2.487	2.554	2.640	2.746	2.877	3.034	
	DN	150	353	2.774	2.830	2.905	2.984	3.086	3.212	3.367	3.554	
	DN	200	404	3.149	3.213	3.299	3.390	3.507	3.652	3.830	4.045	
	DN	250	458	3.547	3.619	3.717	3.820	3.953	4.118	4.321	4.565	
	DN	300	509	3.922	4.003	4.111	4.226	4.374	4.558	4.784	5.056	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				7.756							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.552							
3.9	CUTTING FOR MODIFICATION				0.633	0.646	0.664	0.682	0.705	0.735	0.770	0.814
4.1-4.3	FLANGE UNION				3.172	3.965	4.441					
4.4	SPECTACLE BLIND				0.634							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				5.374	6.569	7.763					
5.2	INSTALLATION OF ACTUATED VALVE				8.061	8.957	10.151					
5.3	INST. OF ACTUATED WAFER TYP VALVE				3.988	4.351	4.895					
5.4	WAFER TYP VALVE INSTALLATION				2.390	2.688	2.987					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				2.349	2.568	2.787					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.305							
6.2	SERVICETEST				0.214							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.634							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	400							
	NOMINAL DIAMETER			INCH	16" / 16.000							
	OUTSIDE DIAMETER			MM	406.4							
	WALLTHICKNESS			MM	8.8	10.0	11.0	12.5	14.2	16.0	17.5	20.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				1.916	2.121	2.288	2.534	2.808	3.092	3.324	3.702
1.2	PIPING ON PIPERACK				1.629	1.802	1.945	2.154	2.387	2.628	2.825	3.147
1.3	PIPING DISMANTLING				0.575	0.636	0.686	0.760	0.842	0.928	0.997	1.111
2.1	FITTING (1N) CONNECTION				1.234							
2.2	FITTING (2N) CONNECTIONS				2.005							
2.3	FITTING (3N) CONNECTIONS				2.468							
2.4	FLANGE				1.543	1.851	2.160					
3.1	CIRCUMFERENTIAL WELD				5.696	6.130	6.515	7.129	7.875	8.720	9.464	10.779
3.2	FILLET WELD				3.417	3.678	3.909	4.277	4.725	5.232	5.678	6.468
3.3	MITRE WELD				7.404	7.969	8.469	9.267	10.238	11.336	12.303	14.013
3.4	BRANCH CONNECTION				9.113	9.808	10.423	11.406	12.600	13.952	15.143	17.247
3.5	WELDOLET, NIPOLET				12.369							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	206	2.238	2.397	2.537	2.759	3.027	3.329	3.592	4.052	
	DN	20	212	2.299	2.463	2.607	2.837	3.114	3.425	3.697	4.173	
	DN	25	218	2.360	2.529	2.678	2.914	3.200	3.521	3.802	4.294	
	DN	40	233	2.512	2.693	2.853	3.108	3.415	3.761	4.064	4.595	
	DN	50	245	2.634	2.825	2.994	3.263	3.588	3.954	4.274	4.837	
	DN	80	274	2.928	3.144	3.334	3.637	4.004	4.418	4.781	5.420	
	DN	100	299	3.182	3.418	3.627	3.960	4.364	4.819	5.219	5.923	
	DN	150	353	3.730	4.011	4.260	4.657	5.139	5.684	6.164	7.010	
	DN	200	404	4.247	4.571	4.858	5.316	5.872	6.502	7.056	8.036	
	DN	250	458	4.795	5.164	5.491	6.013	6.648	7.367	8.001	9.123	
	DN	300	509	5.313	5.724	6.088	6.671	7.380	8.184	8.893	10.149	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				7.756							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.552							
3.9	CUTTING FOR MODIFICATION				0.854	0.919	0.977	1.069	1.181	1.308	1.420	1.617
4.1-4.3	FLANGE UNION				3.172	3.965	4.441					
4.4	SPECTACLE BLIND				0.634							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				5.374	6.569	7.763					
5.2	INSTALLATION OF ACTUATED VALVE				8.061	8.957	10.151					
5.3	INST. OF ACTUATED WAFER TYP VALVE				3.988	4.351	4.895					
5.4	WAFER TYP VALVE INSTALLATION				2.390	2.688	2.987					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				2.349	2.568	2.787					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.305							
6.2	SERVICETEST				0.214							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.634							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401


POS.	NOMINAL DIAMETER	MM	450								
	NOMINAL DIAMETER	INCH	18" / 18.000								
	OUTSIDE DIAMETER	MM	457.0								
	WALLTHICKNESS	MM	4.0	4.5	5.0	6.3	7.1	8.0	8.8	10.0	
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		1.149	1.254	1.358	1.622	1.781	1.958	2.112	2.340	
1.2	PIPING ON PIPERACK		0.977	1.066	1.154	1.379	1.514	1.664	1.795	1.989	
1.3	PIPING DISMANTLING		0.345	0.376	0.407	0.487	0.534	0.587	0.634	0.702	
2.1	FITTING (1N) CONNECTION		1.387								
2.2	FITTING (2N) CONNECTIONS		2.254								
2.3	FITTING (3N) CONNECTIONS		2.775								
2.4	FLANGE		1.734	2.081	2.428						
3.1	CIRCUMFERENTIAL WELD		4.816	4.945	5.083	5.480	5.749	6.074	6.380	6.870	
3.2	FILLET WELD		2.890	2.967	3.050	3.288	3.449	3.644	3.828	4.122	
3.3	MITRE WELD		6.261	6.429	6.608	7.124	7.474	7.896	8.294	8.932	
3.4	BRANCH CONNECTION		7.705	7.912	8.133	8.767	9.198	9.718	10.208	10.993	
3.5	WELDOLET, NIPOLET		13.864								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		8.669								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)		0.617								
3.9	CUTTING FOR MODIFICATION		0.722	0.742	0.762	0.822	0.862	0.911	0.957	1.031	
4.1-4.3	FLANGE UNION		3.627	4.534	5.078						
4.4	SPECTACLE BLIND		0.725								
4.5	PIPE BENDING TO DN 6"/150										
4.6	PREPARATION OF THREADED ENDS										
4.7	SEALING OF THREADED CONNECTION										
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		6.118	7.477	8.837						
5.2	INSTALLATION OF ACTUATED VALVE		9.176	10.196	11.556						
5.3	INST. OF ACTUATED WAFER TYP VALVE		4.564	4.979	5.601						
5.4	WAFER TYP VALVE INSTALLATION		2.769	3.115	3.461						
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	2.604	2.823	3.042						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.340								
6.2	SERVICETEST		0.238								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.725								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										





FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	450								
	NOMINAL DIAMETER	INCH	18" / 18.000								
	OUTSIDE DIAMETER	MM	457.0								
	WALLTHICKNESS	MM	11.0	12.5	14.2	16.0	17.5	20.0			
	SCHEDULE	PN	<64	<161	>160						
1.1	PIPING IN FIELD		2.527	2.803	3.109	3.427	3.687	4.113			
1.2	PIPING ON PIPERACK		2.148	2.382	2.643	2.913	3.134	3.496			
1.3	PIPING DISMANTLING		0.758	0.841	0.933	1.028	1.106	1.234			
2.1	FITTING (1N) CONNECTION		1.387								
2.2	FITTING (2N) CONNECTIONS		2.254								
2.3	FITTING (3N) CONNECTIONS		2.775								
2.4	FLANGE		1.734	2.081	2.428						
3.1	CIRCUMFERENTIAL WELD		7.305	8.000	8.845	9.801	10.645	12.137			
3.2	FILLET WELD		4.383	4.800	5.307	5.881	6.387	7.282			
3.3	MITRE WELD		9.497	10.400	11.498	12.742	13.838	15.778			
3.4	BRANCH CONNECTION		11.689	12.800	14.151	15.682	17.031	19.419			
3.5	WELDOLET, NIPOLET		13.864								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15								
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS		8.669								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)		0.617								
3.9	CUTTING FOR MODIFICATION		1.096	1.200	1.327	1.470	1.597	1.821			
4.1-4.3	FLANGE UNION		3.627	4.534	5.078						
4.4	SPECTACLE BLIND		0.725								
4.5	PIPE BENDING TO DN 6"/150										
4.6	PREPARATION OF THREADED ENDS										
4.7	SEALING OF THREADED CONNECTION										
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION		6.118	7.477	8.837						
5.2	INSTALLATION OF ACTUATED VALVE		9.176	10.196	11.556						
5.3	INST. OF ACTUATED WAFER TYP VALVE		4.564	4.979	5.601						
5.4	WAFER TYP VALVE INSTALLATION		2.769	3.115	3.461						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		2.604	2.823	3.042						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.340								
6.2	SERVICETEST		0.238								
7.1	NOZZLE REINFORCING BRACKETS		0.200								
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS		0.725								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	500							
	NOMINAL DIAMETER			INCH	20" / 20.000							
	OUTSIDE DIAMETER			MM	508.0							
	WALLTHICKNESS			MM	3.6	4.0	4.5	5.0	5.6	6.3	7.1	8.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD			1.151	1.245	1.361	1.475	1.611	1.766	1.942	2.136	
1.2	PIPING ON PIPERACK			0.979	1.058	1.157	1.254	1.369	1.501	1.651	1.816	
1.3	PIPING DISMANTLING			0.345	0.374	0.408	0.443	0.483	0.530	0.583	0.641	
2.1	FITTING (1N) CONNECTION			1.541								
2.2	FITTING (2N) CONNECTIONS			2.504								
2.3	FITTING (3N) CONNECTIONS			3.081								
2.4	FLANGE			1.926	2.311	2.696						
3.1	CIRCUMFERENTIAL WELD			5.219	5.327	5.471	5.625	5.821	6.066	6.367	6.728	
3.2	FILLET WELD			3.132	3.196	3.283	3.375	3.493	3.640	3.820	4.037	
3.3	MITRE WELD			6.785	6.925	7.112	7.312	7.568	7.886	8.277	8.747	
3.4	BRANCH CONNECTION			8.351	8.523	8.754	9.000	9.314	9.706	10.187	10.765	
3.5	WELDOLET, NIPOLET			15.372								
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	219	1.788	1.822	1.868	1.917	1.979	2.056	2.150	2.264	
	DN	20	224	1.825	1.860	1.907	1.957	2.020	2.099	2.196	2.312	
	DN	25	231	1.876	1.913	1.961	2.012	2.078	2.160	2.259	2.379	
	DN	40	246	1.987	2.025	2.077	2.132	2.202	2.289	2.396	2.524	
	DN	50	258	2.075	2.116	2.170	2.227	2.301	2.393	2.505	2.639	
	DN	80	286	2.281	2.326	2.386	2.450	2.532	2.634	2.759	2.909	
	DN	100	312	2.472	2.522	2.587	2.657	2.747	2.859	2.995	3.159	
	DN	150	366	2.870	2.928	3.005	3.088	3.193	3.325	3.485	3.679	
	DN	200	417	3.245	3.311	3.400	3.494	3.614	3.765	3.949	4.170	
	DN	250	471	3.642	3.717	3.817	3.924	4.060	4.231	4.439	4.690	
	DN	300	521	4.010	4.093	4.204	4.322	4.473	4.662	4.893	5.171	
	DN	400	604	4.621	4.717	4.846	4.983	5.159	5.378	5.647	5.971	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS			9.589								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			0.682								
3.9	CUTTING FOR MODIFICATION			0.783	0.799	0.821	0.844	0.873	0.910	0.955	1.009	
4.1-4.3	FLANGE UNION			4.097	5.122	5.736						
4.4	SPECTACLE BLIND			0.819								
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION			6.869	8.396	9.922						
5.2	INSTALLATION OF ACTUATED VALVE			10.304	11.449	12.975						
5.3	INST. OF ACTUATED WAFER TYP VALVE			5.149	5.617	6.320						
5.4	WAFER TYP VALVE INSTALLATION			3.159	3.553	3.948						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			2.859	3.078	3.297						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.			0.375								
6.2	SERVICETEST			0.263								
7.1	NOZZLE REINFORCING BRACKETS			0.200								
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS			0.819								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	500							
	NOMINAL DIAMETER			INCH	20" / 20.000							
	OUTSIDE DIAMETER			MM	508.0							
	WALLTHICKNESS			MM	8.8	10.0	11.0	12.5	14.2	16.0	17.5	20.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				2.307	2.558	2.765	3.070	3.409	3.761	4.050	4.521
1.2	PIPING ON PIPERACK				1.961	2.175	2.350	2.609	2.898	3.197	3.442	3.843
1.3	PIPING DISMANTLING				0.692	0.767	0.829	0.921	1.023	1.128	1.215	1.356
2.1	FITTING (1N) CONNECTION				1.541							
2.2	FITTING (2N) CONNECTIONS				2.504							
2.3	FITTING (3N) CONNECTIONS				3.081							
2.4	FLANGE				1.926	2.311	2.696					
3.1	CIRCUMFERENTIAL WELD				7.070	7.617	8.102	8.878	9.821	10.891	11.834	13.505
3.2	FILLET WELD				4.242	4.570	4.861	5.327	5.893	6.535	7.101	8.103
3.3	MITRE WELD				9.191	9.902	10.533	11.541	12.768	14.158	15.385	17.557
3.4	BRANCH CONNECTION				11.312	12.187	12.964	14.204	15.714	17.426	18.935	21.608
3.5	WELDOLET, NIPOLET				15.372							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	219	2.370	2.540	2.689	2.927	3.214	3.537	3.819	4.314	
	DN	20	224	2.421	2.595	2.748	2.992	3.286	3.617	3.907	4.414	
	DN	25	231	2.492	2.671	2.830	3.082	3.387	3.729	4.029	4.555	
	DN	40	246	2.644	2.836	3.006	3.276	3.602	3.970	4.292	4.857	
	DN	50	258	2.766	2.968	3.146	3.431	3.775	4.162	4.501	5.099	
	DN	80	286	3.050	3.275	3.475	3.792	4.177	4.611	4.991	5.662	
	DN	100	312	3.314	3.561	3.779	4.128	4.550	5.027	5.446	6.185	
	DN	150	366	3.862	4.154	4.412	4.825	5.326	5.893	6.391	7.272	
	DN	200	417	4.379	4.714	5.010	5.483	6.059	6.710	7.284	8.298	
	DN	250	471	4.927	5.307	5.643	6.181	6.835	7.575	8.228	9.384	
	DN	300	521	5.435	5.856	6.229	6.826	7.553	8.377	9.103	10.390	
	DN	400	604	6.277	6.767	7.202	7.898	8.745	9.707	10.556	12.061	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				9.589							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.682							
3.9	CUTTING FOR MODIFICATION				1.061	1.143	1.215	1.332	1.473	1.634	1.775	2.026
4.1-4.3	FLANGE UNION				4.097	5.122	5.736					
4.4	SPECTACLE BLIND				0.819							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				6.869	8.396	9.922					
5.2	INSTALLATION OF ACTUATED VALVE				10.304	11.449	12.975					
5.3	INST. OF ACTUATED WAFER TYP VALVE				5.149	5.617	6.320					
5.4	WAFER TYP VALVE INSTALLATION				3.159	3.553	3.948					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				2.859	3.078	3.297					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.375							
6.2	SERVICETEST				0.263							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				0.819							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	600							
	NOMINAL DIAMETER			INCH	24" / 24.000							
	OUTSIDE DIAMETER			MM	610.0							
	WALLTHICKNESS			MM	4.5	5.0	5.6	6.3	7.1	8.0	8.8	10.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD			1.571	1.706	1.866	2.050	2.258	2.488	2.690	2.989	
1.2	PIPING ON PIPERACK			1.335	1.450	1.586	1.743	1.919	2.115	2.287	2.541	
1.3	PIPING DISMANTLING			0.471	0.512	0.560	0.615	0.677	0.746	0.807	0.897	
2.1	FITTING (1N) CONNECTION			1.847								
2.2	FITTING (2N) CONNECTIONS			3.002								
2.3	FITTING (3N) CONNECTIONS			3.695								
2.4	FLANGE			2.309	2.771	3.233						
3.1	CIRCUMFERENTIAL WELD			6.523	6.708	6.944	7.240	7.602	8.038	8.450	9.110	
3.2	FILLET WELD			3.914	4.025	4.167	4.344	4.561	4.823	5.070	5.466	
3.3	MITRE WELD			8.480	8.720	9.028	9.412	9.882	10.449	10.985	11.844	
3.4	BRANCH CONNECTION			10.437	10.733	11.111	11.584	12.163	12.861	13.521	14.577	
3.5	WELDOLET, NIPOLET			18.387								
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	263	2.208	2.267	2.342	2.436	2.550	2.687	2.817	3.023	
	DN	20	269	2.255	2.315	2.392	2.488	2.604	2.745	2.877	3.089	
	DN	25	276	2.309	2.371	2.450	2.548	2.668	2.812	2.948	3.165	
	DN	40	290	2.417	2.482	2.565	2.669	2.795	2.947	3.091	3.319	
	DN	50	302	2.510	2.578	2.664	2.772	2.904	3.063	3.212	3.451	
	DN	80	331	2.734	2.809	2.904	3.023	3.168	3.342	3.507	3.769	
	DN	100	356	2.928	3.008	3.110	3.238	3.395	3.583	3.760	4.044	
	DN	150	410	3.345	3.438	3.556	3.704	3.885	4.103	4.308	4.637	
	DN	200	461	3.740	3.844	3.978	4.144	4.348	4.594	4.826	5.197	
	DN	250	515	4.157	4.274	4.424	4.610	4.839	5.114	5.374	5.790	
	DN	300	566	4.552	4.680	4.845	5.050	5.302	5.605	5.891	6.350	
	DN	400	648	5.186	5.334	5.522	5.758	6.046	6.394	6.723	7.250	
	DN	500	750	5.975	6.146	6.365	6.638	6.973	7.376	7.758	8.370	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS			11.429								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			0.812								
3.9	CUTTING FOR MODIFICATION			0.978	1.006	1.042	1.086	1.140	1.206	1.268	1.367	
4.1-4.3	FLANGE UNION			5.080	6.350	7.112						
4.4	SPECTACLE BLIND			1.016								
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION			8.395	10.260	12.126						
5.2	INSTALLATION OF ACTUATED VALVE			12.592	13.992	15.857						
5.3	INST. OF ACTUATED WAFER TYP VALVE			6.345	6.921	7.787						
5.4	WAFER TYP VALVE INSTALLATION			3.967	4.463	4.959						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			3.369	3.588	3.807						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.			0.445								
6.2	SERVICETEST			0.312								
7.1	NOZZLE REINFORCING BRACKETS			0.200								
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS			1.016								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											





FACTORLIST PIPING - DIN


LindeEntityCode_ph-W-LX 2401


POS.	NOMINAL DIAMETER	MM	600						
	NOMINAL DIAMETER	INCH	24" / 24.000						
	OUTSIDE DIAMETER	MM	610.0						
	WALLTHICKNESS	MM	11.0	12.5	14.2	16.0	17.5	20.0	
	SCHEDULE	PN	<64	<161	>160				
1.1	PIPING IN FIELD		3.234	3.596	4.000	4.419	4.763	5.326	
1.2	PIPING ON PIPERACK		2.749	3.057	3.400	3.756	4.049	4.527	
1.3	PIPING DISMANTLING		0.970	1.079	1.200	1.326	1.429	1.598	
2.1	FITTING (1N) CONNECTION		1.847						
2.2	FITTING (2N) CONNECTIONS		3.002						
2.3	FITTING (3N) CONNECTIONS		3.695						
2.4	FLANGE		2.309	2.771	3.233				
3.1	CIRCUMFERENTIAL WELD		9.696	10.634	11.775	13.071	14.214	16.242	
3.2	FILLET WELD		5.818	6.380	7.065	7.842	8.528	9.745	
3.3	MITRE WELD		12.605	13.824	15.308	16.992	18.478	21.114	
3.4	BRANCH CONNECTION		15.514	17.014	18.840	20.913	22.742	25.987	
3.5	WELDOLET, NIPOLET		18.387						
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15						
	BRANCH - DN	15 263	3.205	3.495	3.846	4.242	4.589	5.199	
	DN	20 269	3.275	3.573	3.933	4.338	4.694	5.320	
	DN	25 276	3.357	3.663	4.033	4.450	4.816	5.461	
	DN	40 290	3.522	3.844	4.234	4.675	5.061	5.742	
	DN	50 302	3.662	3.999	4.407	4.867	5.271	5.984	
	DN	80 331	4.002	4.373	4.823	5.332	5.779	6.567	
	DN	100 356	4.295	4.696	5.182	5.732	6.216	7.070	
	DN	150 410	4.928	5.393	5.958	6.598	7.161	8.157	
	DN	200 461	5.526	6.052	6.691	7.415	8.053	9.183	
	DN	250 515	6.159	6.749	7.467	8.280	8.998	10.270	
	DN	300 566	6.757	7.407	8.199	9.098	9.891	11.296	
	DN	400 648	7.718	8.466	9.377	10.412	11.325	12.946	
	DN	500 750	8.913	9.783	10.843	12.046	13.110	14.998	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)									
3.7	WELDING GASKETS		11.429						
3.8	BACKINGRING (FOR ALUMINIUM ONLY)		0.812						
3.9	CUTTING FOR MODIFICATION		1.454	1.595	1.766	1.961	2.132	2.436	
4.1-4.3	FLANGE UNION		5.080	6.350	7.112				
4.4	SPECTACLE BLIND		1.016						
4.5	PIPE BENDING TO DN 6"/150								
4.6	PREPARATION OF THREADED ENDS								
4.7	SEALING OF THREADED CONNECTION								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7								
5.1	VALVE INSTALLATION		8.395	10.260	12.126				
5.2	INSTALLATION OF ACTUATED VALVE		12.592	13.992	15.857				
5.3	INST. OF ACTUATED WAFER TYP VALVE		6.345	6.921	7.787				
5.4	WAFER TYP VALVE INSTALLATION		3.967	4.463	4.959				
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		3.369	3.588	3.807				
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5								
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.445						
6.2	SERVICETEST		0.312						
7.1	NOZZLE REINFORCING BRACKETS		0.200						
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3						
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3						
7.4	EXCESS MATER. ON WELDING ROOTS		1.016						
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION								

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	700							
	NOMINAL DIAMETER			INCH	28" / 28.000							
	OUTSIDE DIAMETER			MM	711.0							
	WALLTHICKNESS			MM	4.5	5.0	5.6	6.3	7.1	8.0	8.8	10.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				1.775	1.930	2.115	2.327	2.566	2.831	3.064	3.408
1.2	PIPING ON PIPERACK				1.508	1.641	1.797	1.978	2.181	2.406	2.604	2.897
1.3	PIPING DISMANTLING				0.532	0.579	0.634	0.698	0.770	0.849	0.919	1.022
2.1	FITTING (1N) CONNECTION				2.154							
2.2	FITTING (2N) CONNECTIONS				3.500							
2.3	FITTING (3N) CONNECTIONS				4.308							
2.4	FLANGE				2.693	3.231	3.770					
3.1	CIRCUMFERENTIAL WELD				7.564	7.780	8.057	8.402	8.825	9.335	9.817	10.589
3.2	FILLET WELD				4.539	4.668	4.834	5.041	5.295	5.601	5.890	6.353
3.3	MITRE WELD				9.834	10.115	10.474	10.922	11.472	12.135	12.762	13.766
3.4	BRANCH CONNECTION				12.103	12.449	12.891	13.443	14.119	14.935	15.707	16.942
3.5	WELDOLET, NIPOLET				21.372							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	15	298	2.479	2.546	2.631	2.738	2.868	3.024	3.172	3.407	
	DN	20	303	2.518	2.586	2.673	2.781	2.913	3.072	3.222	3.462	
	DN	25	310	2.572	2.642	2.730	2.841	2.977	3.140	3.293	3.539	
	DN	40	325	2.688	2.761	2.854	2.971	3.113	3.284	3.446	3.704	
	DN	50	337	2.781	2.857	2.954	3.074	3.222	3.400	3.567	3.835	
	DN	80	365	2.997	3.080	3.185	3.316	3.476	3.669	3.852	4.143	
	DN	100	391	3.198	3.287	3.400	3.540	3.712	3.920	4.115	4.428	
	DN	150	445	3.616	3.717	3.846	4.006	4.203	4.440	4.663	5.021	
	DN	200	496	4.010	4.123	4.267	4.446	4.666	4.931	5.181	5.581	
	DN	250	550	4.428	4.553	4.713	4.912	5.156	5.451	5.729	6.174	
	DN	300	600	4.815	4.951	5.126	5.344	5.610	5.932	6.236	6.723	
	DN	400	683	5.457	5.612	5.811	6.060	6.364	6.731	7.079	7.634	
	DN	500	785	6.246	6.425	6.654	6.940	7.291	7.713	8.114	8.754	
	DN	600	887	7.035	7.237	7.496	7.820	8.217	8.696	9.149	9.874	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS			13.252								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			0.943								
3.9	CUTTING FOR MODIFICATION			1.135	1.167	1.209	1.260	1.324	1.400	1.473	1.588	
4.1-4.3	FLANGE UNION			6.114	7.642	8.559						
4.4	SPECTACLE BLIND			1.223								
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION			9.946	12.156	14.367						
5.2	INSTALLATION OF ACTUATED VALVE			14.919	16.577	18.787						
5.3	INST. OF ACTUATED WAFER TYP VALVE			7.569	8.258	9.290						
5.4	WAFER TYP VALVE INSTALLATION			4.810	5.411	6.013						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			3.879	4.098	4.317						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.			0.515								
6.2	SERVICETEST			0.361								
7.1	NOZZLE REINFORCING BRACKETS			0.200								
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS			1.223								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401						
POS.	NOMINAL DIAMETER			MM	700									
	NOMINAL DIAMETER			INCH	28" / 28.000									
	OUTSIDE DIAMETER			MM	711.0									
	WALLTHICKNESS			MM	11.0	12.5	14.2	16.0	17.5	20.0				
	SCHEDULE			PN	<64	<161	>160							
1.1	PIPING IN FIELD				3.691	4.109	4.575	5.060	5.457	6.110				
1.2	PIPING ON PIPERACK				3.137	3.493	3.889	4.301	4.639	5.193				
1.3	PIPING DISMANTLING				1.107	1.233	1.372	1.518	1.637	1.833				
2.1	FITTING (1N) CONNECTION				2.154									
2.2	FITTING (2N) CONNECTIONS				3.500									
2.3	FITTING (3N) CONNECTIONS				4.308									
2.4	FLANGE				2.693	3.231	3.770							
3.1	CIRCUMFERENTIAL WELD				11.275	12.372	13.710	15.229	16.570	18.951				
3.2	FILLET WELD				6.765	7.423	8.226	9.137	9.942	11.371				
3.3	MITRE WELD				14.657	16.084	17.823	19.797	21.541	24.637				
3.4	BRANCH CONNECTION				18.040	19.796	21.936	24.366	26.513	30.322				
3.5	WELDOLET, NIPOLET				21.372									
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15									
		BRANCH - DN	15	298	3.615	3.947	4.349	4.803	5.201	5.903				
		DN	20	303	3.674	4.012	4.421	4.883	5.289	6.004				
		DN	25	310	3.756	4.102	4.522	4.995	5.411	6.145				
		DN	40	325	3.932	4.296	4.737	5.236	5.674	6.447				
		DN	50	337	4.072	4.451	4.909	5.428	5.884	6.688				
		DN	80	365	4.401	4.812	5.312	5.877	6.374	7.251				
		DN	100	391	4.705	5.148	5.685	6.293	6.829	7.775				
		DN	150	445	5.338	5.845	6.461	7.159	7.773	8.861				
		DN	200	496	5.936	6.503	7.194	7.976	8.666	9.887				
		DN	250	550	6.569	7.201	7.969	8.841	9.611	10.974				
		DN	300	600	7.155	7.846	8.688	9.643	10.486	11.980				
		DN	400	683	8.128	8.918	9.880	10.973	11.938	13.650				
		DN	500	785	9.324	10.235	11.346	12.607	13.723	15.703				
		DN	600	887	10.519	11.552	12.811	14.242	15.507	17.755				
	MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)													
3.7	WELDING GASKETS				13.252									
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				0.943									
3.9	CUTTING FOR MODIFICATION				1.691	1.856	2.056	2.284	2.486	2.843				
4.1-4.3	FLANGE UNION				6.114	7.642	8.559							
4.4	SPECTACLE BLIND				1.223									
4.5	PIPE BENDING TO DN 6"/150													
4.6	PREPARATION OF THREADED ENDS													
4.7	SEALING OF THREADED CONNECTION													
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7													
5.1	VALVE INSTALLATION				9.946	12.156	14.367							
5.2	INSTALLATION OF ACTUATED VALVE				14.919	16.577	18.787							
5.3	INST. OF ACTUATED WAFER TYP VALVE				7.569	8.258	9.290							
5.4	WAFER TYP VALVE INSTALLATION				4.810	5.411	6.013							
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				3.879	4.098	4.317							
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5													
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.515									
6.2	SERVICETEST				0.361									
7.1	NOZZLE REINFORCING BRACKETS				0.200									
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3									
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3									
7.4	EXCESS MATER. ON WELDING ROOTS				1.223									
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION													

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	800							
	NOMINAL DIAMETER			INCH	32" / 32.000							
	OUTSIDE DIAMETER			MM	813.0							
	WALLTHICKNESS			MM	4.5	5.0	5.6	6.3	7.1	8.0	8.8	10.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				1.978	2.154	2.362	2.602	2.872	3.172	3.436	3.825
1.2	PIPING ON PIPERACK				1.681	1.831	2.008	2.212	2.441	2.696	2.920	3.251
1.3	PIPING DISMANTLING				0.593	0.646	0.709	0.781	0.862	0.952	1.031	1.148
2.1	FITTING (1N) CONNECTION				2.461							
2.2	FITTING (2N) CONNECTIONS				3.999							
2.3	FITTING (3N) CONNECTIONS				4.921							
2.4	FLANGE				3.076	3.691	4.306					
3.1	CIRCUMFERENTIAL WELD				8.616	8.864	9.180	9.575	10.060	10.644	11.197	12.082
3.2	FILLET WELD				5.170	5.318	5.508	5.745	6.036	6.386	6.718	7.249
3.3	MITRE WELD				11.201	11.523	11.934	12.448	13.078	13.837	14.556	15.707
3.4	BRANCH CONNECTION				13.786	14.182	14.688	15.321	16.096	17.031	17.915	19.332
3.5	WELDOLET, NIPOLET				24.388							
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	20	333	2.750	2.825	2.920	3.040	3.186	3.361	3.527	3.791	
		DN	25	340	2.804	2.880	2.978	3.100	3.249	3.429	3.598	3.868
		DN	40	355	2.920	3.000	3.102	3.230	3.385	3.573	3.750	4.033
		DN	50	367	3.013	3.096	3.201	3.333	3.494	3.689	3.872	4.165
		DN	80	395	3.229	3.319	3.433	3.575	3.749	3.958	4.156	4.472
		DN	100	421	3.430	3.526	3.647	3.799	3.985	4.209	4.420	4.758
		DN	150	475	3.848	3.956	4.093	4.265	4.475	4.729	4.968	5.351
		DN	200	526	4.243	4.362	4.515	4.705	4.938	5.220	5.485	5.910
		DN	250	580	4.660	4.792	4.961	5.171	5.429	5.740	6.033	6.503
		DN	300	630	5.047	5.190	5.374	5.602	5.883	6.221	6.541	7.052
		DN	400	713	5.689	5.851	6.059	6.319	6.637	7.020	7.383	7.964
		DN	500	815	6.478	6.664	6.902	7.199	7.563	8.002	8.418	9.084
		DN	600	917	7.267	7.476	7.744	8.079	8.489	8.984	9.453	10.204
		DN	700	1018	8.048	8.280	8.578	8.950	9.407	9.957	10.478	11.313
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				15.093							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				1.073							
3.9	CUTTING FOR MODIFICATION				1.292	1.330	1.377	1.436	1.509	1.597	1.680	1.812
4.1-4.3	FLANGE UNION				7.192	8.990	10.069					
4.4	SPECTACLE BLIND				1.438							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				11.520	14.080	16.640					
5.2	INSTALLATION OF ACTUATED VALVE				17.280	19.200	21.760					
5.3	INST. OF ACTUATED WAFER TYP VALVE				8.820	9.622	10.824					
5.4	WAFER TYP VALVE INSTALLATION				5.684	6.394	7.105					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				4.389	4.608	4.827					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.585							
6.2	SERVICETEST				0.410							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				1.438							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401					
POS.	NOMINAL DIAMETER			MM	800								
	NOMINAL DIAMETER			INCH	32" / 32.000								
	OUTSIDE DIAMETER			MM	813.0								
	WALLTHICKNESS			MM	11.0	12.5	14.2	16.0	17.5	20.0			
	SCHEDULE			PN	<64	<161	>160						
1.1	PIPING IN FIELD				4.146	4.619	5.147	5.697	6.149	6.889			
1.2	PIPING ON PIPERACK				3.524	3.926	4.375	4.842	5.226	5.856			
1.3	PIPING DISMANTLING				1.244	1.386	1.544	1.709	1.845	2.067			
2.1	FITTING (1N) CONNECTION				2.461								
2.2	FITTING (2N) CONNECTIONS				3.999								
2.3	FITTING (3N) CONNECTIONS				4.921								
2.4	FLANGE				3.076	3.691	4.306						
3.1	CIRCUMFERENTIAL WELD				12.869	14.128	15.664	17.408	18.950	21.688			
3.2	FILLET WELD				7.721	8.477	9.398	10.445	11.370	13.013			
3.3	MITRE WELD				16.730	18.367	20.363	22.631	24.635	28.194			
3.4	BRANCH CONNECTION				20.590	22.605	25.062	27.853	30.320	34.701			
3.5	WELDOLET, NIPOLET				24.388								
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15								
	BRANCH - DN	20	333	4.026	4.399	4.852	5.364	5.814	6.608				
	DN	25	340	4.108	4.489	4.953	5.476	5.936	6.748				
	DN	40	355	4.283	4.683	5.168	5.716	6.199	7.050				
	DN	50	367	4.424	4.838	5.340	5.909	6.409	7.292				
	DN	80	395	4.752	5.199	5.743	6.357	6.899	7.855				
	DN	100	421	5.057	5.535	6.116	6.774	7.354	8.378				
	DN	150	475	5.690	6.232	6.892	7.639	8.298	9.465				
	DN	200	526	6.288	6.891	7.625	8.457	9.191	10.491				
	DN	250	580	6.921	7.588	8.400	9.322	10.136	11.578				
	DN	300	630	7.507	8.233	9.119	10.123	11.010	12.584				
	DN	400	713	8.480	9.305	10.311	11.454	12.463	14.254				
	DN	500	815	9.675	10.622	11.777	13.088	14.247	16.306				
	DN	600	917	10.871	11.939	13.242	14.723	16.032	18.359				
	DN	700	1018	12.055	13.243	14.693	16.341	17.799	20.391				
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)													
3.7	WELDING GASKETS			15.093									
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			1.073									
3.9	CUTTING FOR MODIFICATION			1.930	2.119	2.350	2.611	2.842	3.253				
4.1-4.3	FLANGE UNION			7.192	8.990	10.069							
4.4	SPECTACLE BLIND			1.438									
4.5	PIPE BENDING TO DN 6"/150												
4.6	PREPARATION OF THREADED ENDS												
4.7	SEALING OF THREADED CONNECTION												
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7												
5.1	VALVE INSTALLATION			11.520	14.080	16.640							
5.2	INSTALLATION OF ACTUATED VALVE			17.280	19.200	21.760							
5.3	INST. OF ACTUATED WAFER TYP VALVE			8.820	9.622	10.824							
5.4	WAFER TYP VALVE INSTALLATION			5.684	6.394	7.105							
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			4.389	4.608	4.827							
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5												
6.1	PRESSURE TEST, HYDROST./PNEUM.			0.585									
6.2	SERVICETEST			0.410									
7.1	NOZZLE REINFORCING BRACKETS			0.200									
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3									
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3									
7.4	EXCESS MATER. ON WELDING ROOTS			1.438									
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION												


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	900							
	NOMINAL DIAMETER			INCH	36" / 36.000							
	OUTSIDE DIAMETER			MM	914.0							
	WALLTHICKNESS			MM	4.5	5.0	5.6	6.3	7.1	8.0	8.8	10.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				2.177	2.372	2.604	2.871	3.172	3.506	3.799	4.233
1.2	PIPING ON PIPERACK				1.850	2.016	2.213	2.440	2.696	2.980	3.229	3.598
1.3	PIPING DISMANTLING				0.653	0.712	0.781	0.861	0.952	1.052	1.140	1.270
2.1	FITTING (1N) CONNECTION				2.767							
2.2	FITTING (2N) CONNECTIONS				4.497							
2.3	FITTING (3N) CONNECTIONS				5.535							
2.4	FLANGE				3.459	4.151	4.843					
3.1	CIRCUMFERENTIAL WELD				9.658	9.936	10.292	10.737	11.283	11.941	12.564	13.561
3.2	FILLET WELD				5.795	5.962	6.175	6.442	6.770	7.164	7.538	8.137
3.3	MITRE WELD				12.555	12.917	13.380	13.959	14.668	15.523	16.333	17.629
3.4	BRANCH CONNECTION				15.453	15.898	16.468	17.180	18.052	19.105	20.102	21.698
3.5	WELDOLET, NIPOLET											
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	40	316	2.618	2.689	2.780	2.893	3.031	3.198	3.354	3.605	
	DN	50	328	2.711	2.785	2.879	2.997	3.140	3.313	3.476	3.736	
	DN	80	356	2.928	3.008	3.110	3.238	3.395	3.583	3.760	4.044	
	DN	100	382	3.129	3.215	3.325	3.463	3.631	3.833	4.024	4.329	
	DN	150	436	3.546	3.645	3.771	3.929	4.121	4.353	4.572	4.922	
	DN	200	487	3.941	4.051	4.192	4.369	4.584	4.844	5.090	5.482	
	DN	250	540	4.351	4.473	4.630	4.826	5.066	5.354	5.627	6.064	
	DN	300	591	4.745	4.880	5.051	5.266	5.529	5.845	6.145	6.624	
	DN	400	674	5.387	5.541	5.737	5.982	6.282	6.645	6.987	7.536	
	DN	500	775	6.168	6.345	6.571	6.854	7.200	7.617	8.012	8.645	
	DN	600	877	6.957	7.157	7.414	7.734	8.126	8.599	9.047	9.764	
	DN	700	978	7.738	7.962	8.248	8.605	9.043	9.572	10.072	10.873	
	DN	800	1080	8.527	8.774	9.090	9.485	9.970	10.554	11.107	11.993	
	MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS				16.915							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				1.203							
3.9	CUTTING FOR MODIFICATION				1.449	1.490	1.544	1.611	1.692	1.791	1.885	2.034
4.1-4.3	FLANGE UNION				8.312	10.391	11.637					
4.4	SPECTACLE BLIND				1.662							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				13.113	16.028	18.942					
5.2	INSTALLATION OF ACTUATED VALVE				19.670	21.856	24.770					
5.3	INST. OF ACTUATED WAFER TYP VALVE				10.093	11.011	12.387					
5.4	WAFER TYP VALVE INSTALLATION				6.585	7.409	8.232					
5.5	SPINDLE EXTENSION			LENGTH - 1/2/3 MET.	4.899	5.118	5.337					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.655							
6.2	SERVICETEST				0.459							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				1.662							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											





FACTORLIST PIPING - DIN


LindeEntityCode_ph-W-LX 2401


POS.	NOMINAL DIAMETER	MM	900						
	NOMINAL DIAMETER	INCH	36" / 36.000						
	OUTSIDE DIAMETER	MM	914.0						
	WALLTHICKNESS	MM	11.0	12.5	14.2	16.0	17.5	20.0	
	SCHEDULE	PN	<64	<161	>160				
1.1	PIPING IN FIELD		4.590	5.118	5.707	6.320	6.824	7.651	
1.2	PIPING ON PIPERACK		3.902	4.350	4.851	5.372	5.800	6.504	
1.3	PIPING DISMANTLING		1.377	1.535	1.712	1.896	2.047	2.295	
2.1	FITTING (1N) CONNECTION		2.767						
2.2	FITTING (2N) CONNECTIONS		4.497						
2.3	FITTING (3N) CONNECTIONS		5.535						
2.4	FLANGE		3.459	4.151	4.843				
3.1	CIRCUMFERENTIAL WELD		14.448	15.867	17.598	19.566	21.306	24.398	
3.2	FILLET WELD		8.669	9.520	10.559	11.740	12.784	14.639	
3.3	MITRE WELD		18.782	20.627	22.878	25.436	27.698	31.717	
3.4	BRANCH CONNECTION		23.116	25.387	28.157	31.306	34.090	39.036	
3.5	WELDOLET, NIPOLET								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15						
	BRANCH - DN	40	316	3.826	4.179	4.608	5.091	5.516	6.266
	DN	50	328	3.967	4.334	4.780	5.284	5.726	6.507
	DN	80	356	4.295	4.696	5.182	5.732	6.216	7.070
	DN	100	382	4.600	5.032	5.556	6.149	6.671	7.594
	DN	150	436	5.233	5.729	6.332	7.014	7.616	8.680
	DN	200	487	5.831	6.387	7.064	7.832	8.508	9.706
	DN	250	540	6.452	7.071	7.826	8.681	9.436	10.773
	DN	300	591	7.050	7.730	8.559	9.498	10.328	11.799
	DN	400	674	8.023	8.802	9.751	10.829	11.780	13.469
	DN	500	775	9.206	10.106	11.202	12.447	13.548	15.501
	DN	600	877	10.402	11.422	12.667	14.082	15.332	17.554
	DN	700	978	11.586	12.726	14.118	15.700	17.100	19.586
	DN	800	1080	12.781	14.043	15.584	17.335	18.884	21.638
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)									
3.7	WELDING GASKETS		16.915						
3.8	BACKINGRING (FOR ALUMINIUM ONLY)		1.203						
3.9	CUTTING FOR MODIFICATION		2.167	2.380	2.640	2.935	3.196	3.660	
4.1-4.3	FLANGE UNION		8.312	10.391	11.637				
4.4	SPECTACLE BLIND		1.662						
4.5	PIPE BENDING TO DN 6"/150								
4.6	PREPARATION OF THREADED ENDS								
4.7	SEALING OF THREADED CONNECTION								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7								
5.1	VALVE INSTALLATION		13.113	16.028	18.942				
5.2	INSTALLATION OF ACTUATED VALVE		19.670	21.856	24.770				
5.3	INST. OF ACTUATED WAFER TYP VALVE		10.093	11.011	12.387				
5.4	WAFER TYP VALVE INSTALLATION		6.585	7.409	8.232				
5.5	SPINDLE EXTENSION	LENGTH - 1/2/3 MET.	4.899	5.118	5.337				
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5								
6.1	PRESSURE TEST, HYDROST./PNEUM.		0.655						
6.2	SERVICETEST		0.459						
7.1	NOZZLE REINFORCING BRACKETS		0.200						
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3						
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3						
7.4	EXCESS MATER. ON WELDING ROOTS		1.662						
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION								


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	1000							
	NOMINAL DIAMETER			INCH	40" / 40.000							
	OUTSIDE DIAMETER			MM	1016.0							
	WALLTHICKNESS			MM	4.5	5.0	5.6	6.3	7.1	8.0	8.8	10.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				2.375	2.590	2.846	3.140	3.471	3.839	4.162	4.641
1.2	PIPING ON PIPERACK				2.019	2.202	2.419	2.669	2.950	3.263	3.538	3.944
1.3	PIPING DISMANTLING				0.712	0.777	0.854	0.942	1.041	1.152	1.249	1.392
2.1	FITTING (1N) CONNECTION				3.074							
2.2	FITTING (2N) CONNECTIONS				4.995							
2.3	FITTING (3N) CONNECTIONS				6.148							
2.4	FLANGE				3.843	4.611	5.380					
3.1	CIRCUMFERENTIAL WELD				10.710	11.019	11.416	11.911	12.518	13.250	13.944	15.054
3.2	FILLET WELD				6.426	6.612	6.849	7.147	7.511	7.950	8.366	9.033
3.3	MITRE WELD				13.923	14.325	14.840	15.484	16.273	17.225	18.127	19.571
3.4	BRANCH CONNECTION				17.135	17.631	18.265	19.057	20.028	21.201	22.310	24.087
3.5	WELDOLET, NIPOLET											
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	40	331	2.734	2.809	2.904	3.023	3.168	3.342	3.507	3.769	
	DN	50	343	2.827	2.904	3.003	3.126	3.276	3.458	3.628	3.901	
	DN	80	371	3.044	3.127	3.234	3.368	3.531	3.727	3.912	4.209	
	DN	100	397	3.245	3.334	3.449	3.592	3.767	3.977	4.176	4.494	
	DN	150	451	3.662	3.765	3.895	4.058	4.257	4.497	4.724	5.087	
	DN	200	501	4.049	4.163	4.308	4.489	4.711	4.979	5.232	5.636	
	DN	250	555	4.467	4.593	4.754	4.955	5.202	5.499	5.780	6.229	
	DN	300	606	4.861	4.999	5.175	5.395	5.665	5.990	6.297	6.789	
	DN	400	689	5.503	5.660	5.861	6.112	6.419	6.789	7.139	7.700	
	DN	500	790	6.284	6.464	6.695	6.983	7.336	7.762	8.164	8.809	
	DN	600	892	7.073	7.277	7.538	7.863	8.262	8.744	9.199	9.929	
	DN	700	993	7.854	8.081	8.372	8.735	9.179	9.716	10.224	11.038	
	DN	800	1095	8.643	8.894	9.214	9.615	10.106	10.698	11.259	12.158	
	DN	900	1196	9.424	9.698	10.048	10.486	11.023	11.671	12.284	13.267	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS			18.756								
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			1.334								
3.9	CUTTING FOR MODIFICATION			1.606	1.653	1.712	1.787	1.878	1.988	2.092	2.258	
4.1-4.3	FLANGE UNION			9.471	11.838	13.259						
4.4	SPECTACLE BLIND			1.894								
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION			14.725	17.997	21.269						
5.2	INSTALLATION OF ACTUATED VALVE			22.087	24.541	27.814						
5.3	INST. OF ACTUATED WAFER TYP VALVE			11.387	12.423	13.975						
5.4	WAFER TYP VALVE INSTALLATION			7.512	8.451	9.391						
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			5.409	5.628	5.847						
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.			0.725								
6.2	SERVICETEST			0.508								
7.1	NOZZLE REINFORCING BRACKETS			0.200								
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS			1.894								
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401						
POS.	NOMINAL DIAMETER			MM	1000									
	NOMINAL DIAMETER			INCH	40" / 40.000									
	OUTSIDE DIAMETER			MM	1016.0									
	WALLTHICKNESS			MM	11.0	12.5	14.2	16.0	17.5	20.0				
	SCHEDULE			PN	<64	<161	>160							
1.1	PIPING IN FIELD				5.034	5.616	6.265	6.942	7.499	8.412				
1.2	PIPING ON PIPERACK				4.279	4.774	5.326	5.901	6.374	7.150				
1.3	PIPING DISMANTLING				1.510	1.685	1.880	2.083	2.250	2.524				
2.1	FITTING (1N) CONNECTION				3.074									
2.2	FITTING (2N) CONNECTIONS				4.995									
2.3	FITTING (3N) CONNECTIONS				6.148									
2.4	FLANGE				3.843	4.611	5.380							
3.1	CIRCUMFERENTIAL WELD				16.042	17.623	19.552	21.746	23.686	27.134				
3.2	FILLET WELD				9.625	10.574	11.731	13.047	14.212	16.280				
3.3	MITRE WELD				20.854	22.910	25.418	28.269	30.792	35.274				
3.4	BRANCH CONNECTION				25.667	28.196	31.284	34.793	37.897	43.415				
3.5	WELDOLET, NIPOLET													
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15									
	BRANCH - DN	40	331	4.002	4.373	4.823	5.332	5.779	6.567					
	DN	50	343	4.143	4.528	4.996	5.524	5.989	6.809					
	DN	80	371	4.471	4.890	5.398	5.973	6.479	7.372					
	DN	100	397	4.776	5.225	5.771	6.389	6.934	7.895					
	DN	150	451	5.409	5.922	6.547	7.255	7.878	8.982					
	DN	200	501	5.995	6.568	7.266	8.056	8.753	9.988					
	DN	250	555	6.628	7.265	8.041	8.921	9.698	11.075					
	DN	300	606	7.225	7.924	8.774	9.739	10.591	12.101					
	DN	400	689	8.198	8.995	9.966	11.069	12.043	13.771					
	DN	500	790	9.382	10.299	11.417	12.688	13.810	15.803					
	DN	600	892	10.578	11.616	12.883	14.322	15.595	17.856					
	DN	700	993	11.762	12.920	14.334	15.941	17.362	19.888					
	DN	800	1095	12.957	14.237	15.799	17.575	19.147	21.940					
	DN	900	1196	14.141	15.541	17.250	19.194	20.914	23.972					
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)														
3.7	WELDING GASKETS				18.756									
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				1.334									
3.9	CUTTING FOR MODIFICATION				2.406	2.643	2.933	3.262	3.553	4.070				
4.1-4.3	FLANGE UNION				9.471	11.838	13.259							
4.4	SPECTACLE BLIND				1.894									
4.5	PIPE BENDING TO DN 6"/150													
4.6	PREPARATION OF THREADED ENDS													
4.7	SEALING OF THREADED CONNECTION													
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7													
5.1	VALVE INSTALLATION				14.725	17.997	21.269							
5.2	INSTALLATION OF ACTUATED VALVE				22.087	24.541	27.814							
5.3	INST. OF ACTUATED WAFER TYP VALVE				11.387	12.423	13.975							
5.4	WAFER TYP VALVE INSTALLATION				7.512	8.451	9.391							
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				5.409	5.628	5.847							
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5													
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.725									
6.2	SERVICETEST				0.508									
7.1	NOZZLE REINFORCING BRACKETS				0.200									
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3									
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3									
7.4	EXCESS MATER. ON WELDING ROOTS				1.894									
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION													


				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	1200							
	NOMINAL DIAMETER			INCH	48" / 48.000							
	OUTSIDE DIAMETER			MM	1220.0							
	WALLTHICKNESS			MM	5.6	6.3	7.1	8.0	8.8	10.0	11.0	12.5
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				3.322	3.669	4.061	4.496	4.878	5.443	5.909	6.598
1.2	PIPING ON PIPERACK				2.823	3.119	3.452	3.821	4.146	4.627	5.022	5.608
1.3	PIPING DISMANTLING				0.997	1.101	1.218	1.349	1.463	1.633	1.773	1.979
2.1	FITTING (1N) CONNECTION				3.687							
2.2	FITTING (2N) CONNECTIONS				5.992							
2.3	FITTING (3N) CONNECTIONS				7.375							
2.4	FLANGE				4.609	5.531	6.453					
3.1	CIRCUMFERENTIAL WELD				13.662	14.258	14.988	15.869	16.704	18.041	19.230	21.134
3.2	FILLET WELD				8.197	8.555	8.993	9.522	10.022	10.824	11.538	12.681
3.3	MITRE WELD				17.761	18.535	19.484	20.630	21.715	23.453	24.999	27.475
3.4	BRANCH CONNECTION				21.860	22.813	23.981	25.391	26.726	28.865	30.768	33.815
3.5	WELDOLET, NIPOLET											
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	80	415	3.598	3.747	3.930	4.151	4.359	4.692	4.987	5.458	
	DN	100	440	3.804	3.963	4.157	4.392	4.613	4.966	5.280	5.780	
	DN	150	494	4.250	4.429	4.648	4.911	5.161	5.559	5.913	6.478	
	DN	200	545	4.671	4.869	5.111	5.403	5.678	6.119	6.510	7.136	
	DN	250	599	5.118	5.335	5.601	5.923	6.226	6.712	7.143	7.833	
	DN	300	650	5.539	5.775	6.065	6.414	6.744	7.272	7.741	8.492	
	DN	400	733	6.224	6.491	6.818	7.213	7.586	8.183	8.714	9.563	
	DN	500	834	7.059	7.363	7.736	8.185	8.611	9.292	9.898	10.867	
	DN	600	936	7.901	8.243	8.662	9.167	9.646	10.412	11.094	12.184	
	DN	700	1037	8.735	9.114	9.579	10.140	10.671	11.521	12.277	13.488	
	DN	800	1139	9.578	9.994	10.505	11.122	11.706	12.641	13.473	14.805	
	DN	900	1240	10.412	10.866	11.423	12.095	12.731	13.750	14.657	16.109	
	DN	1000	1342	11.254	11.746	12.349	13.077	13.766	14.870	15.852	17.426	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS				22.437							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				1.594							
3.9	CUTTING FOR MODIFICATION				2.049	2.139	2.248	2.380	2.506	2.706	2.884	3.170
4.1-4.3	FLANGE UNION				11.891	14.863	16.647					
4.4	SPECTACLE BLIND				2.378							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				17.995	21.994	25.993					
5.2	INSTALLATION OF ACTUATED VALVE				26.992	29.992	33.990					
5.3	INST. OF ACTUATED WAFER TYP VALVE				14.031	15.306	17.220					
5.4	WAFER TYP VALVE INSTALLATION				9.435	10.615	11.794					
5.5	SPINDLE EXTENSION			LENGTH - 1/2/3 MET.	6.429	6.648	6.867					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				0.865							
6.2	SERVICETEST				0.606							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				2.378							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	1200				1400			
	NOMINAL DIAMETER			INCH	48" / 48.000				56" / 56.000			
	OUTSIDE DIAMETER			MM	1220.0				1420.0			
	WALLTHICKNESS			MM	14.2	16.0	17.5	20.0	6.3	7.1	8.0	8.8
	SCHEDULE			PN	<64	<161	>160		<64	<161	>160	
1.1	PIPING IN FIELD				7.366	8.168	8.828	9.912	4.179	4.629	5.129	5.567
1.2	PIPING ON PIPERACK				6.261	6.943	7.504	8.425	3.553	3.935	4.359	4.732
1.3	PIPING DISMANTLING				2.210	2.451	2.648	2.973	1.254	1.389	1.539	1.670
2.1	FITTING (1N) CONNECTION				3.687				4.301			
2.2	FITTING (2N) CONNECTIONS				5.992				6.989			
2.3	FITTING (3N) CONNECTIONS				7.375				8.601			
2.4	FLANGE				4.609	5.531	6.453		5.376	6.451	7.526	
3.1	CIRCUMFERENTIAL WELD				23.460	26.105	28.445	32.607	16.559	17.410	18.437	19.410
3.2	FILLET WELD				14.076	15.663	17.067	19.564	9.935	10.446	11.062	11.646
3.3	MITRE WELD				30.498	33.936	36.979	42.389	21.526	22.633	23.968	25.233
3.4	BRANCH CONNECTION				37.536	41.768	45.512	52.171	26.494	27.856	29.499	31.056
3.5	WELDOLET, NIPOLET											
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	80	415	6.030	6.678	7.249	8.258	3.747	3.930	4.151	4.359	
	DN	100	440	6.389	7.079	7.686	8.761	3.963	4.157	4.392	4.613	
	DN	150	494	7.165	7.944	8.631	9.847	4.429	4.648	4.911	5.161	
	DN	200	545	7.898	8.761	9.523	10.873	4.869	5.111	5.403	5.678	
	DN	250	599	8.673	9.627	10.468	11.960	5.335	5.601	5.923	6.226	
	DN	300	650	9.406	10.444	11.360	12.986	5.775	6.065	6.414	6.744	
	DN	400	733	10.599	11.774	12.813	14.656	6.491	6.818	7.213	7.586	
	DN	500	834	12.050	13.393	14.580	16.688	7.363	7.736	8.185	8.611	
	DN	600	936	13.515	15.027	16.365	18.741	8.243	8.662	9.167	9.646	
	DN	700	1037	14.966	16.646	18.132	20.773	9.114	9.579	10.140	10.671	
	DN	800	1139	16.431	18.280	19.917	22.826	9.994	10.505	11.122	11.706	
	DN	900	1240	17.882	19.899	21.684	24.858	10.866	11.423	12.095	12.731	
	DN	1000	1342	19.348	21.534	23.469	26.910	11.746	12.349	13.077	13.766	
	DN	1200	1572					13.731	14.438	15.291	16.100	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)												
3.7	WELDING GASKETS			22.437				26.046				
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			1.594				1.855				
3.9	CUTTING FOR MODIFICATION			3.519	3.916	4.267	4.891	2.484	2.611	2.766	2.911	
4.1-4.3	FLANGE UNION			11.891	14.863	16.647		14.435	18.044	20.209		
4.4	SPECTACLE BLIND			2.378				2.887				
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION			17.995	21.994	25.993		21.320	26.058	30.796		
5.2	INSTALLATION OF ACTUATED VALVE			26.992	29.992	33.990		31.980	35.534	40.271		
5.3	INST. OF ACTUATED WAFER TYP VALVE			14.031	15.306	17.220		16.739	18.261	20.544		
5.4	WAFER TYP VALVE INSTALLATION			9.435	10.615	11.794		11.440	12.870	14.300		
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			6.429	6.648	6.867		7.449	7.668	7.887		
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.			0.865				1.005				
6.2	SERVICETEST			0.606				0.704				
7.1	NOZZLE REINFORCING BRACKETS			0.200				0.200				
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3								
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3								
7.4	EXCESS MATER. ON WELDING ROOTS			2.378				2.887				
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401			
POS.	NOMINAL DIAMETER			MM	1400						
	NOMINAL DIAMETER			INCH	56" / 56.000						
	OUTSIDE DIAMETER			MM	1420.0						
	WALLTHICKNESS			MM	10.0	11.0	12.5	14.5	16.0	17.5	20.0
	SCHEDULE			PN	<64	<161	>160				
1.1	PIPING IN FIELD			6.217	6.752	7.544	8.583	9.350	10.109	11.357	
1.2	PIPING ON PIPERACK			5.285	5.739	6.412	7.295	7.948	8.593	9.653	
1.3	PIPING DISMANTLING			1.865	2.026	2.263	2.575	2.805	3.033	3.407	
2.1	FITTING (1N) CONNECTION			4.301							
2.2	FITTING (2N) CONNECTIONS			6.989							
2.3	FITTING (3N) CONNECTIONS			8.601							
2.4	FLANGE			5.376	6.451	7.526					
3.1	CIRCUMFERENTIAL WELD			20.969	22.355	24.577	27.790	30.378	33.111	37.973	
3.2	FILLET WELD			12.581	13.413	14.746	16.674	18.227	19.867	22.784	
3.3	MITRE WELD			27.259	29.062	31.951	36.128	39.492	43.044	49.365	
3.4	BRANCH CONNECTION			33.550	35.769	39.324	44.465	48.605	52.978	60.757	
3.5	WELDOLET, NIPOLET										
3.6	REINFORCEMENT PAD RING/OUTSIDE			ACC. TO LS 433-15							
	BRANCH - DN	80	441	4.977	5.291	5.793	6.516	7.095	7.703	8.781	
	DN	100	467	5.263	5.596	6.129	6.896	7.511	8.158	9.304	
	DN	150	521	5.856	6.229	6.826	7.686	8.377	9.103	10.390	
	DN	200	571	6.405	6.815	7.472	8.418	9.178	9.978	11.397	
	DN	250	625	6.998	7.448	8.169	9.208	10.043	10.923	12.483	
	DN	300	676	7.557	8.046	8.827	9.955	10.861	11.815	13.509	
	DN	400	759	8.469	9.019	9.899	11.169	12.191	13.268	15.179	
	DN	500	860	9.578	10.203	11.203	12.647	13.809	15.035	17.212	
	DN	600	962	10.698	11.398	12.520	14.140	15.444	16.820	19.264	
	DN	700	1063	11.807	12.582	13.824	15.618	17.063	18.587	21.296	
	DN	800	1165	12.927	13.778	15.141	17.111	18.697	20.371	23.349	
	DN	900	1266	14.036	14.962	16.445	18.589	20.316	22.139	25.381	
	DN	1000	1368	15.156	16.157	17.762	20.082	21.950	23.923	27.433	
	DN	1200	1572	17.396	18.548	20.395	23.067	25.220	27.493	31.538	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS			26.046							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)			1.855							
3.9	CUTTING FOR MODIFICATION			3.145	3.353	3.687	4.169	4.557	4.967	5.696	
4.1-4.3	FLANGE UNION			14.435	18.044	20.209					
4.4	SPECTACLE BLIND			2.887							
4.5	PIPE BENDING TO DN 6"/150										
4.6	PREPARATION OF THREADED ENDS										
4.7	SEALING OF THREADED CONNECTION										
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION			21.320	26.058	30.796					
5.2	INSTALLATION OF ACTUATED VALVE			31.980	35.534	40.271					
5.3	INST. OF ACTUATED WAFER TYP VALVE			16.739	18.261	20.544					
5.4	WAFER TYP VALVE INSTALLATION			11.440	12.870	14.300					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.			7.449	7.668	7.887					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.			1.005							
6.2	SERVICETEST			0.704							
7.1	NOZZLE REINFORCING BRACKETS			0.200							
7.2	SUPPORT			FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS			FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS			2.887							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	1600							
	NOMINAL DIAMETER			INCH	64" / 64.000							
	OUTSIDE DIAMETER			MM	1620.0							
	WALLTHICKNESS			MM	7.1	8.0	8.8	10.0	12.5	14.2	16.0	17.5
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				5.190	5.753	6.247	6.980	8.477	9.474	10.515	11.373
1.2	PIPING ON PIPERACK				4.411	4.890	5.310	5.933	7.205	8.053	8.938	9.667
1.3	PIPING DISMANTLING				1.557	1.726	1.874	2.094	2.543	2.842	3.155	3.412
2.1	FITTING (1N) CONNECTION				4.914							
2.2	FITTING (2N) CONNECTIONS				7.985							
2.3	FITTING (3N) CONNECTIONS				9.828							
2.4	FLANGE				6.143	7.371	8.600					
3.1	CIRCUMFERENTIAL WELD				19.831	21.005	22.116	23.897	28.020	31.122	34.652	37.777
3.2	FILLET WELD				11.899	12.603	13.270	14.338	16.812	18.673	20.791	22.666
3.3	MITRE WELD				25.781	27.306	28.751	31.066	36.426	40.458	45.047	49.110
3.4	BRANCH CONNECTION				31.730	33.608	35.385	38.235	44.832	49.795	55.443	60.443
3.5	WELDOLET, NIPOLET											
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	100	514	4.829	5.104	5.364	5.779	6.736	7.452	8.264	8.981	
	DN	150	568	5.320	5.624	5.912	6.372	7.433	8.228	9.130	9.926	
	DN	200	618	5.774	6.105	6.419	6.921	8.079	8.946	9.931	10.801	
	DN	250	672	6.264	6.625	6.967	7.514	8.776	9.722	10.796	11.745	
	DN	300	723	6.727	7.116	7.484	8.074	9.434	10.455	11.614	12.638	
	DN	400	806	7.481	7.916	8.327	8.985	10.506	11.647	12.944	14.090	
	DN	500	907	8.398	8.888	9.352	10.094	11.810	13.098	14.563	15.857	
	DN	600	1009	9.325	9.870	10.387	11.214	13.127	14.564	16.197	17.642	
	DN	700	1110	10.242	10.843	11.412	12.323	14.431	16.015	17.816	19.409	
	DN	800	1212	11.168	11.825	12.447	13.443	15.748	17.480	19.450	21.194	
	DN	900	1313	12.086	12.798	13.472	14.552	17.052	18.931	21.069	22.961	
	DN	1000	1415	13.012	13.780	14.507	15.672	18.368	20.396	22.704	24.746	
	DN	1200	1619	14.864	15.744	16.577	17.912	21.002	23.327	25.973	28.315	
	DN	1400	1819	16.681	17.670	18.606	20.108	23.584	26.200	29.178	31.815	
	MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS				29.655							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				2.116							
3.9	CUTTING FOR MODIFICATION				2.975	3.151	3.317	3.585	4.203	4.668	5.198	5.667
4.1-4.3	FLANGE UNION				17.091	21.364	23.928					
4.4	SPECTACLE BLIND				3.418							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				24.693	30.181	35.668					
5.2	INSTALLATION OF ACTUATED VALVE				37.040	41.156	46.643					
5.3	INST. OF ACTUATED WAFER TYP VALVE				19.505	21.278	23.938					
5.4	WAFER TYP VALVE INSTALLATION				13.519	15.208	16.898					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				8.469	8.688	8.907					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				1.145							
6.2	SERVICETEST				0.802							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				3.418							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401				
POS.	NOMINAL DIAMETER			MM	1800							
	NOMINAL DIAMETER			INCH	72" / 72.000							
	OUTSIDE DIAMETER			MM	1820.0							
	WALLTHICKNESS			MM	8.8	10.0	11.0	12.5	14.2	16.0	17.5	20.0
	SCHEDULE			PN	<64	<161	>160					
1.1	PIPING IN FIELD				6.919	7.734	8.404	9.398	10.508	11.666	12.620	14.188
1.2	PIPING ON PIPERACK				5.881	6.574	7.144	7.988	8.932	9.916	10.727	12.060
1.3	PIPING DISMANTLING				2.076	2.320	2.521	2.819	3.152	3.500	3.786	4.257
2.1	FITTING (1N) CONNECTION				5.527							
2.2	FITTING (2N) CONNECTIONS				8.982							
2.3	FITTING (3N) CONNECTIONS				11.055							
2.4	FLANGE				6.909	8.291	9.673					
3.1	CIRCUMFERENTIAL WELD				24.822	26.825	28.607	31.463	34.953	38.925	42.443	48.704
3.2	FILLET WELD				14.893	16.095	17.164	18.878	20.972	23.355	25.466	29.223
3.3	MITRE WELD				32.268	34.872	37.189	40.902	45.439	50.603	55.176	63.316
3.4	BRANCH CONNECTION				39.715	42.920	45.771	50.341	55.925	62.280	67.909	77.927
3.5	WELDOLET, NIPOLET											
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15							
	BRANCH - DN	150	616	6.399	6.899	7.343	8.053	8.918	9.899	10.766	12.302	
	DN	200	667	6.916	7.459	7.940	8.711	9.650	10.716	11.658	13.328	
	DN	250	721	7.464	8.052	8.573	9.408	10.426	11.582	12.603	14.415	
	DN	300	772	7.982	8.612	9.171	10.067	11.159	12.399	13.495	15.441	
	DN	400	854	8.814	9.512	10.132	11.125	12.337	13.713	14.930	17.091	
	DN	500	856	8.834	9.534	10.156	11.151	12.366	13.745	14.965	17.131	
	DN	600	1058	10.884	11.752	12.524	13.759	15.268	16.982	18.499	21.196	
	DN	700	1159	11.909	12.861	13.707	15.063	16.719	18.601	20.267	23.228	
	DN	800	1261	12.944	13.981	14.903	16.380	18.184	20.236	22.051	25.280	
	DN	900	1362	13.969	15.090	16.087	17.684	19.635	21.854	23.818	27.313	
	DN	1000	1464	15.004	16.210	17.282	19.001	21.100	23.489	25.603	29.365	
	DN	1200	1668	17.074	18.450	19.674	21.635	24.031	26.758	29.173	33.470	
	DN	1400	1868	19.103	20.646	22.018	24.217	26.904	29.963	32.672	37.494	
	DN	1600	2068	21.133	22.842	24.362	26.799	29.778	33.168	36.172	41.518	
	MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS				33.264							
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				2.376							
3.9	CUTTING FOR MODIFICATION				3.723	4.024	4.291	4.719	5.243	5.839	6.366	7.306
4.1-4.3	FLANGE UNION				19.850	24.812	27.789					
4.4	SPECTACLE BLIND				3.970							
4.5	PIPE BENDING TO DN 6"/150											
4.6	PREPARATION OF THREADED ENDS											
4.7	SEALING OF THREADED CONNECTION											
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7											
5.1	VALVE INSTALLATION				28.109	34.356	40.602					
5.2	INSTALLATION OF ACTUATED VALVE				42.164	46.849	53.095					
5.3	INST. OF ACTUATED WAFER TYP VALVE				22.321	24.350	27.394					
5.4	WAFER TYP VALVE INSTALLATION				15.663	17.621	19.579					
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				9.489	9.708	9.927					
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5											
6.1	PRESSURE TEST, HYDROST./PNEUM.				1.285							
6.2	SERVICETEST				0.900							
7.1	NOZZLE REINFORCING BRACKETS				0.200							
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3							
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3							
7.4	EXCESS MATER. ON WELDING ROOTS				3.970							
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION											

				FACTORLIST PIPING - DIN				LindeEntityCode_ph-W-LX 2401			
POS.	NOMINAL DIAMETER			MM	2000						
	NOMINAL DIAMETER			INCH	80" / 80.000						
	OUTSIDE DIAMETER			MM	2020.0						
	WALLTHICKNESS			MM	10.0	11.0	12.5	14.2	16.0	17.5	20.0
	SCHEDULE			PN	<64	<161	>160				
1.1	PIPING IN FIELD				8.479	9.216	10.309	11.530	12.804	13.854	15.580
1.2	PIPING ON PIPERACK				7.207	7.834	8.763	9.800	10.884	11.776	13.243
1.3	PIPING DISMANTLING				2.544	2.765	3.093	3.459	3.841	4.156	4.674
2.1	FITTING (1N) CONNECTION				6.141						
2.2	FITTING (2N) CONNECTIONS				9.979						
2.3	FITTING (3N) CONNECTIONS				12.281						
2.4	FLANGE				7.676	9.211	10.746				
3.1	CIRCUMFERENTIAL WELD				29.753	31.733	34.906	38.784	43.199	47.109	54.070
3.2	FILLET WELD				17.852	19.040	20.944	23.270	25.919	28.265	32.442
3.3	MITRE WELD				38.679	41.252	45.378	50.419	56.158	61.242	70.291
3.4	BRANCH CONNECTION				47.604	50.772	55.850	62.054	69.118	75.374	86.512
3.5	WELDOLET, NIPOLET										
3.6	REINFORCEMENT PAD			RING/OUTSIDE	ACC. TO LS 433-15						
	BRANCH - DN	150	657	7.349	7.823	8.582	9.507	10.556	11.483	13.127	
	DN	200	708	7.909	8.421	9.240	10.239	11.373	12.375	14.153	
	DN	250	762	8.502	9.054	9.938	11.015	12.239	13.320	15.240	
	DN	300	813	9.062	9.652	10.596	11.748	13.056	14.212	16.266	
	DN	400	895	9.962	10.613	11.655	12.926	14.370	15.647	17.916	
	DN	500	997	11.082	11.809	12.972	14.391	16.005	17.432	19.968	
	DN	600	1099	12.202	13.004	14.289	15.857	17.639	19.217	22.021	
	DN	700	1200	13.311	14.188	15.593	17.308	19.258	20.984	24.053	
	DN	800	1302	14.431	15.384	16.910	18.773	20.893	22.769	26.105	
	DN	900	1403	15.540	16.567	18.214	20.224	22.511	24.536	28.138	
	DN	1000	1505	16.660	17.763	19.530	21.689	24.146	26.321	30.190	
	DN	1200	1709	18.900	20.154	22.164	24.620	27.415	29.890	34.295	
	DN	1400	1909	21.096	22.498	24.746	27.493	30.620	33.389	38.319	
	DN	1600	2109	23.292	24.843	27.329	30.367	33.825	36.889	42.343	
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)											
3.7	WELDING GASKETS				36.873						
3.8	BACKINGRING (FOR ALUMINIUM ONLY)				2.637						
3.9	CUTTING FOR MODIFICATION				4.463	4.760	5.236	5.818	6.480	7.066	8.110
4.1-4.3	FLANGE UNION				22.701	28.377	31.782				
4.4	SPECTACLE BLIND				4.540						
4.5	PIPE BENDING TO DN 6"/150										
4.6	PREPARATION OF THREADED ENDS										
4.7	SEALING OF THREADED CONNECTION										
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7										
5.1	VALVE INSTALLATION				31.563	38.577	45.592				
5.2	INSTALLATION OF ACTUATED VALVE				47.345	52.606	59.620				
5.3	INST. OF ACTUATED WAFER TYP VALVE				25.183	27.472	30.906				
5.4	WAFER TYP VALVE INSTALLATION				17.868	20.101	22.335				
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.				10.509	10.728	10.947				
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5										
6.1	PRESSURE TEST, HYDROST./PNEUM.				1.425						
6.2	SERVICETEST				0.998						
7.1	NOZZLE REINFORCING BRACKETS				0.200						
7.2	SUPPORT				FACTOR = KG x 0.032 + 0.3						
7.3	HANGER AND SPRING SUPPORTS				FACTOR = KG x 0.032 + 0.3						
7.4	EXCESS MATER. ON WELDING ROOTS				4.540						
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION										



FACTORLIST PIPING - DIN

LindeEntityCode_ph-W-LX 2401

POS.	NOMINAL DIAMETER	MM	2200						
	NOMINAL DIAMETER	INCH	88" / 88.000						
	OUTSIDE DIAMETER	MM	2220.0						
	WALLTHICKNESS	MM	10.0	11.0	12.5	14.2	16.0	17.5	20.0
	SCHEDULE	PN	<64	<161	>160				
1.1	PIPING IN FIELD		9.217	10.020	11.211	12.541	13.931	15.075	16.957
1.2	PIPING ON PIPERACK		7.834	8.517	9.529	10.660	11.841	12.814	14.414
1.3	PIPING DISMANTLING		2.765	3.006	3.363	3.762	4.179	4.522	5.087
2.1	FITTING (1N) CONNECTION		6.754						
2.2	FITTING (2N) CONNECTIONS		10.975						
2.3	FITTING (3N) CONNECTIONS		13.508						
2.4	FLANGE		8.443	10.131	11.820				
3.1	CIRCUMFERENTIAL WELD		32.681	34.858	38.349	42.615	47.472	51.775	59.436
3.2	FILLET WELD		19.608	20.915	23.009	25.569	28.483	31.065	35.661
3.3	MITRE WELD		42.485	45.316	49.854	55.399	61.714	67.307	77.266
3.4	BRANCH CONNECTION		52.289	55.773	61.358	68.184	75.956	82.840	95.097
3.5	WELDOLET, NIPOLET								
3.6	REINFORCEMENT PAD	RING/OUTSIDE	ACC. TO LS 433-15						
MATERIAL MULTIPLICATOR FOR POS. 3.1 TO 3.8 ACC. TO EXPLANATION DOC.-NO &AA-W-SK 2401 (EN)									
3.7	WELDING GASKETS		40.482						
3.8	BACKINGRING (FOR ALUMINIUM ONLY)		2.898						
3.9	CUTTING FOR MODIFICATION		4.902	5.229	5.752	6.392	7.121	7.766	8.915
4.1-4.3	FLANGE UNION		25.640	32.050	35.896				
4.4	SPECTACLE BLIND		5.128						
4.5	PIPE BENDING TO DN 6"/150								
4.6	PREPARATION OF THREADED ENDS								
4.7	SEALING OF THREADED CONNECTION								
4.8	DISMANTLING = 0.7 x FACT. OF POS. 4.1 TO 4.7								
5.1	VALVE INSTALLATION		35.052	42.842	50.631				
5.2	INSTALLATION OF ACTUATED VALVE		52.578	58.420	66.210				
5.3	INST. OF ACTUATED WAFER TYP VALVE		28.087	30.640	34.470				
5.4	WAFER TYP VALVE INSTALLATION		20.128	22.644	25.160				
5.5	SPINDLE EXTENSION LENGTH - 1/2/3 MET.		11.529	11.748	11.967				
5.6	DISMANTLING. = 0.7 x FACT. OF POS. 5.1 TO 5.5								
6.1	PRESSURE TEST, HYDROST./PNEUM.		1.565						
6.2	SERVICETEST		1.096						
7.1	NOZZLE REINFORCING BRACKETS		0.200						
7.2	SUPPORT		FACTOR = KG x 0.032 + 0.3						
7.3	HANGER AND SPRING SUPPORTS		FACTOR = KG x 0.032 + 0.3						
7.4	EXCESS MATER. ON WELDING ROOTS		5.128						
7.5	DRILLG. HOLE FOR INSTRUMENT CONNECTION								