

EXAMINATION REPORT N°04 LIN**1 – Foundation upper surface (according to sketch 1)**

Acceptable*

~~OR~~~~Not acceptable*~~**2 – Inner vessel anchoring system (according to sketch 2)**

Quantity of straps:

OK ~~or not OK~~

Position according to detail 9 of civil-engineering drawing

OK ~~or not OK~~

n° straps	1	2	3	4	5	6	7	8	9	10	11	12	13	14
						IN THE TOLERANCE								
R1	OK													OK
HS	OK													OK
ST1	OK													OK
ST	OK													OK

n° straps	15	16	17	18	19	20	21	22	23	24	25	26	27	28
						IN THE TOLERANCE								
R1	OK													OK
HS	OK													OK
ST1	OK													OK
ST	OK													OK

n° straps	29	30	31	32	33	34	35	36	37	38	39	40	41	42
		IN THE TOLERANCE												
R1	OK			OK										
HS	OK			OK										
ST1	OK			OK										
ST	OK			OK										

n° straps	43	44	45	46	47	48	49	50	51	52	53	54	55	56
R1														
HS														
ST1														
ST														

n° straps	57	58	59	60	61	62	63	64	65	66	67	68	69	70
R1														
HS														
ST1														
ST														

Acceptable*

~~OR~~~~Not acceptable*~~

3 – Outer tank anchoring system (according to sketch 2)Quantity of anchoring: OK ~~or not OK~~

n° bolting	1	2	3	4	5	6	7	8	9	10	11	12	13	14
R2	OK				IN THE TOLERANCE									
HB	OK											OK		
SB1	OK											OK		
SB	OK											OK		

n° bolting	15	16	17	18	19	20	21	22	23	24	25	26	27	28
R2														
HB														
SB1														
SB														

Acceptable*

OR

Not acceptable*

4 – Holes reservation in the foundation

HOLE RESERVATION FOR F1

x1 =

y1 =

HOLE RESERVATION FOR F2

x2 =

y2 =

Acceptable*

OR

Not acceptable*

Made at
Fait à

KOSICE/US-STEEL

on
le:

01/03/2005

For the civil-engineering / Pour le civil-génie
M.For the customer / Pour le client
M.For CMP Arles / Pour CMP Arles
M.

DUFLOT. PH



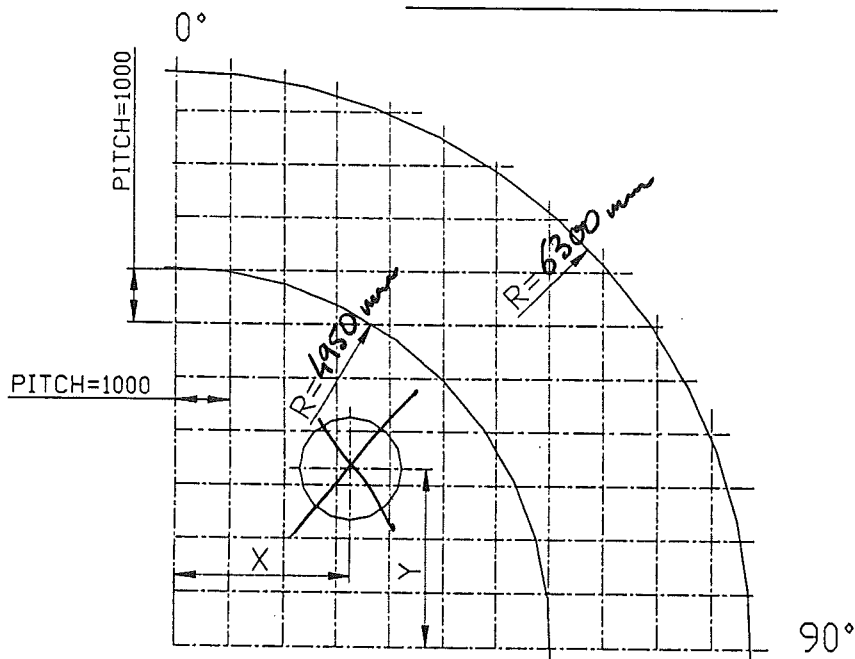
CMP ARLES

Constructions Métalliques
et Préfabrication d'Arles

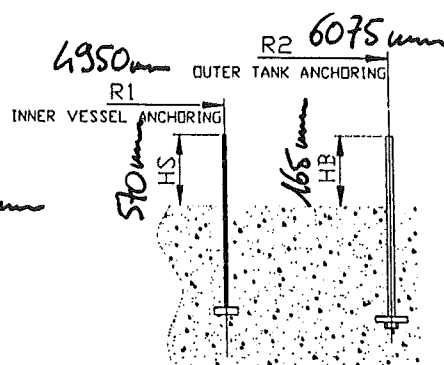
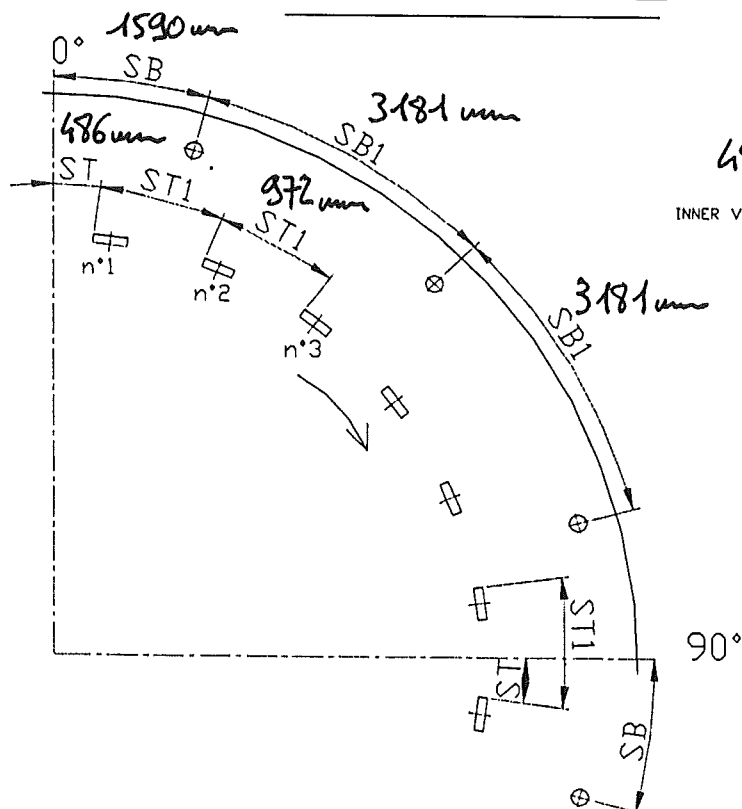
1, Rue Copernic - Z.I. Nord - 13200 ARLES

☎ : 04.90.93.33.30 - Téléfax : 04.90.93.33.31

SKETCH 1



SKETCH 2



Dossier CMP Arles : 783

Page/Sheet 1/8

Client / Customer : AIR LIQUIDE AGS GmbH

Engineered System N° :


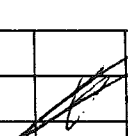

1 RESERVOIR DE STOCKAGE LIN 1000 MT

1 X 1000 MT LIN STORAGE TANK

ITEM B 72001

SPECIFICATION FOR ANCHORAGE STRAPS EMBEDDED PART TESTING

**BON POUR EXECUTION
RELEASED FOR FABRICATION**

1		01/02/05	DUPRESSOIR		01/02/05	REMY		01/02/05	LEBOUCQ		
EDITION EDITION N°	REFERENCE CLIENT REF.	DATE	NOM NAME	SIGN.	DATE	NOM NAME	SIGN.	DATE	NOM NAME	SIGN.	ETAT D'AVANC. STATUS
			REDACTEUR DRAWN UP BY		VERIFICATEUR CHECKED BY		APPROBATEUR APPROVED BY				

Classement CMP Arles : **783-ANC-101**
CMP Arles document N°

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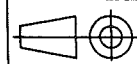
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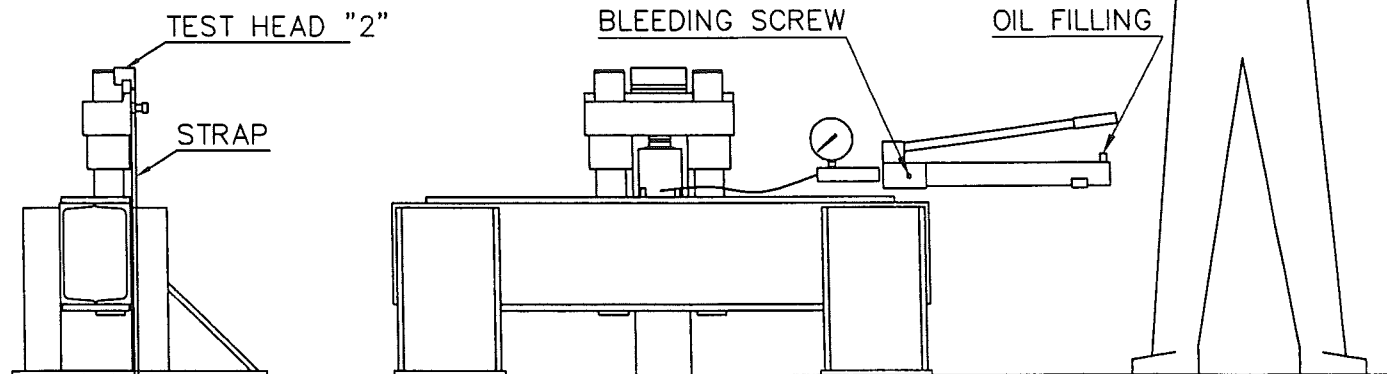
Rev 0

Proc. N° : 783-ANC-101**PROCESS PROGRESS**

Echelle/Scale

/

- 1 - THE TEST MUST BE ACCOMPLISHED BEFORE CLOSING FLAT BOTTOM FOR CONCRETE VISUAL EXAMINATION .
- 2 - THE CONCRETE MUST BE AT ITS MAXIMUM MECHANICAL CHARACTERISTICS DURING THE TEST (GENERALLY AFTER 28 DAYS CURRING) .
- 3 - THE QUANTITY OF ANCHORAGE STRAPS IS DEFINED ON THE DRAWING 783-101
) - THE LOCATION OF ANCHORS TO BE TESTED MUST BE GIVEN BY THE CUSTOMER
- TESTED ANCHORS SHALL BE EQUALLY SPACED
- WELDING OF THE TEST HEAD ACCORDING TO WPS 0135 OF WELDING CATALOGUE CS1
- 4 - CHECK STRAP DIMENSIONS :
 - * WIDTH AND THICKNESS .
 - * LENGTH ABOVE CONCRETE .
 - * CONCRETE FLATNESS IN THE TEST AREAS .
- 5 - MOVE THE TEST MACHINE FROM STRAP TO STRAP WITH A MANUAL FORKLIFT
- THE HYDRAULIC CYLINDER IS AT LOW POSITION.

TANK
...IS

TOP CONCRETE SLAB DON'T PUT AND LEAVE OIL

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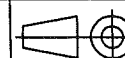
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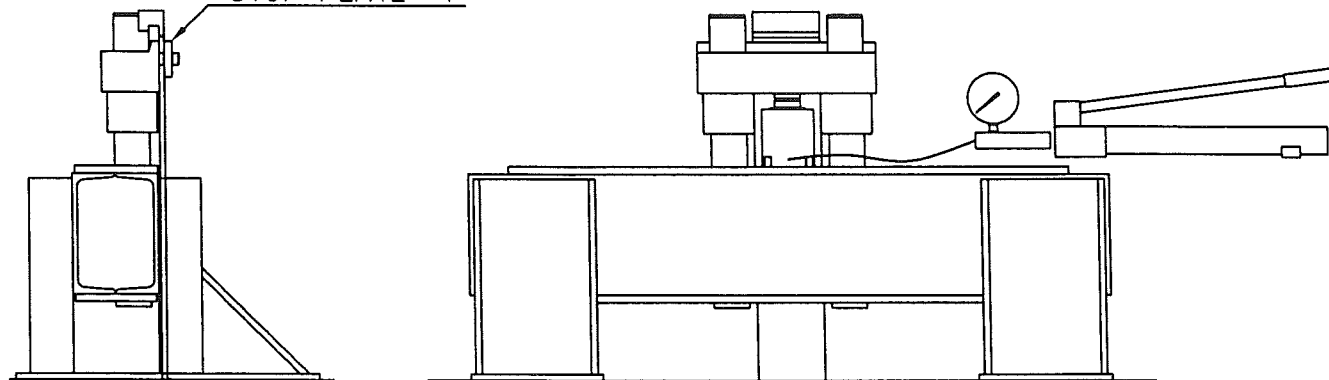
Proc. N° : 783-ANC-101**PROCESS PROGRESS**

Echelle/Scale

6 - POSITION THE STOP PLATE "4" USING THE 20 DIA. PINS TO MAINTAIN STRAP IN POSITION

TANK
AXIS

STOP PLATE "4"

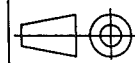


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Client / Customer : AIR LIQUIDE AGS GmbH Engineered System N° :

Rev 0

Proc. N° : 783-ANC-101**PROCESS PROGRESS**Echelle/Scale
/

7 - WITH THE HYDRAULIC JACK, PUT THE SLIDING BLOCK "3" IN CONTACT WITH THE TEST HEAD "2" .

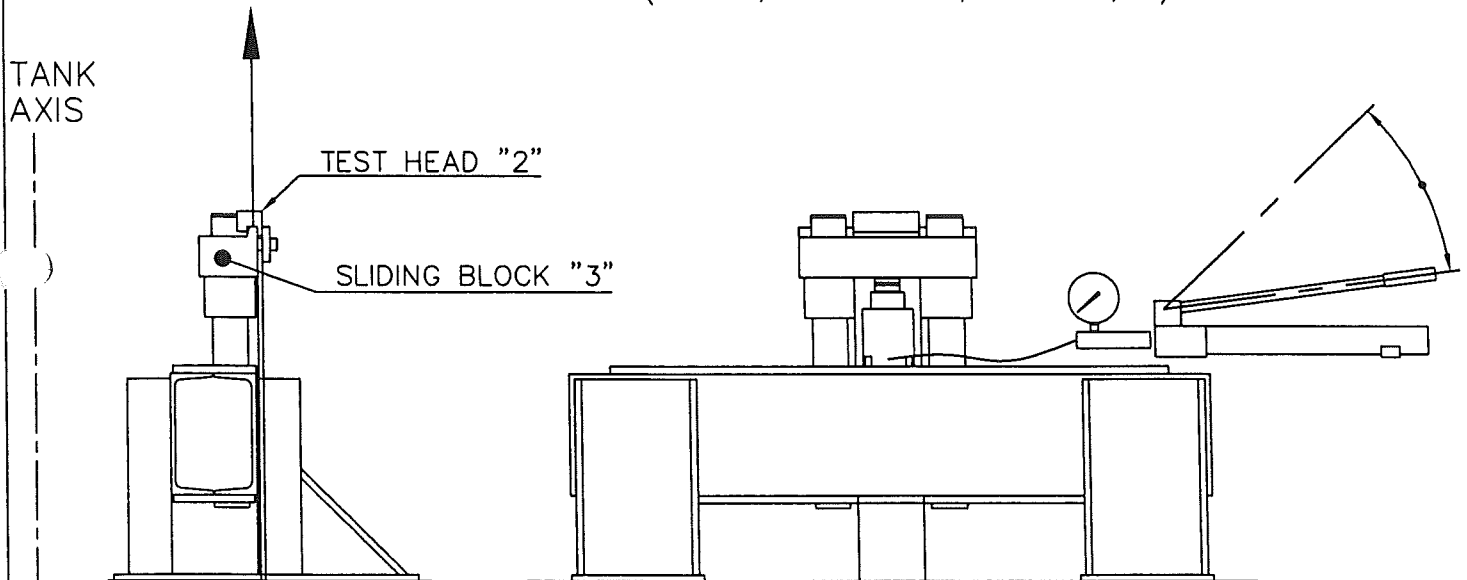
8 - FORCE SHALL BE APPLIED BY SMOOTH PROGRESSIVE PRESSURATION USING THE MANUAL PUMP

9 - PROCEED AS FOLLOWS:

- APPLY 85kN (i.e. 50 % OF THE MAXIMUM LOAD) AND STAY AT THIS LOADING DURING 5 MIN.
- RELEASE THE PRESSURE TO ONLY MAINTAIN THE CONTACT SLIDING BLOCK/TEST HEAD AND STAY 5 MIN.
- APPLY 125kN (i.e. 75 % OF THE MAXIMUM LOAD) AND STAY AT THIS LOADING DURING 5 MIN.
- RELEASE THE PRESSURE TO ONLY MAINTAIN THE CONTACT SLIDING BLOCK/TEST HEAD AND STAY 5 MIN.
- APPLY 165kN (i.e. 100 % OF THE MAXIMUM LOAD) AND STAY AT THIS LOADING DURING 5 MIN.
- RELEASE THE PRESSURE TO ONLY MAINTAIN THE CONTACT SLIDING BLOCK/TEST HEAD AND STAY 5 MIN.

10 - REPEAT THE LOADING AT 100% OF THE MAXIMUM LOAD AND STAY AT THIS LOADING

11 - VISUAL CHECK OF CONCRETE BEHAVIOUR(CRACK, DEFORMATION, FLATNESS,...)



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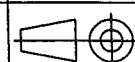
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Engineered System N° :

Rev 0

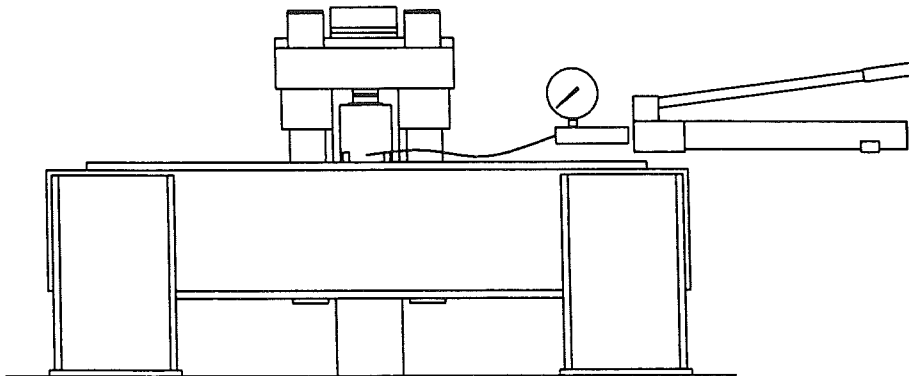
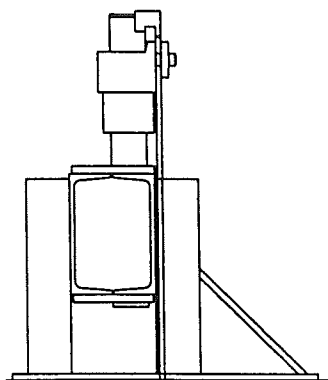
Proc. N° : 783-ANC-101**PROCESS PROGRESS**

Echelle/Scale

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TANK
AXIS

12 - PULL DOWN THE HYDRAULIC JACK (PRESSURE=0) USING THE BLEEDING SCREW



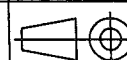
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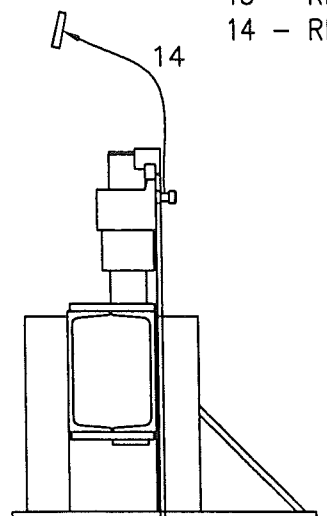
Engineered System N° :

Rev 0

Proc. N° : 783-ANC-101**PROCESS PROGRESS**

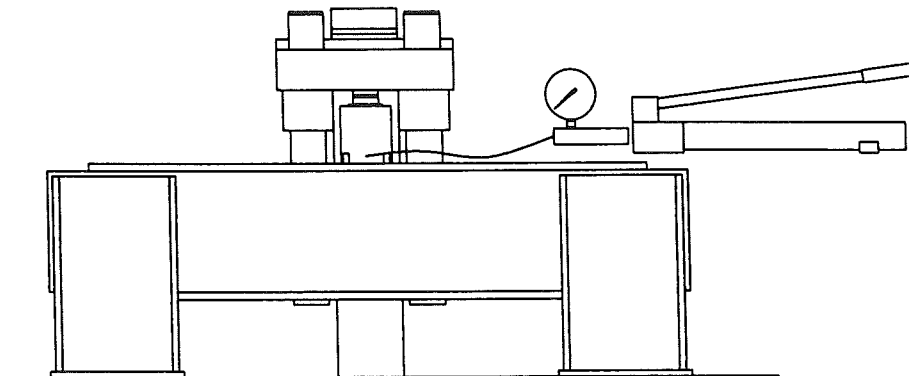
Echelle/Scale

/

TANK
AXIS

13 - REMOVE THE STOP PLATE "4" .

14 - REMOVE THE MACHINE AND PROCEED WITH THE NEXT STRAP



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Engineered System N° :

Rev 0

Proc. N° : 783-ANC-101

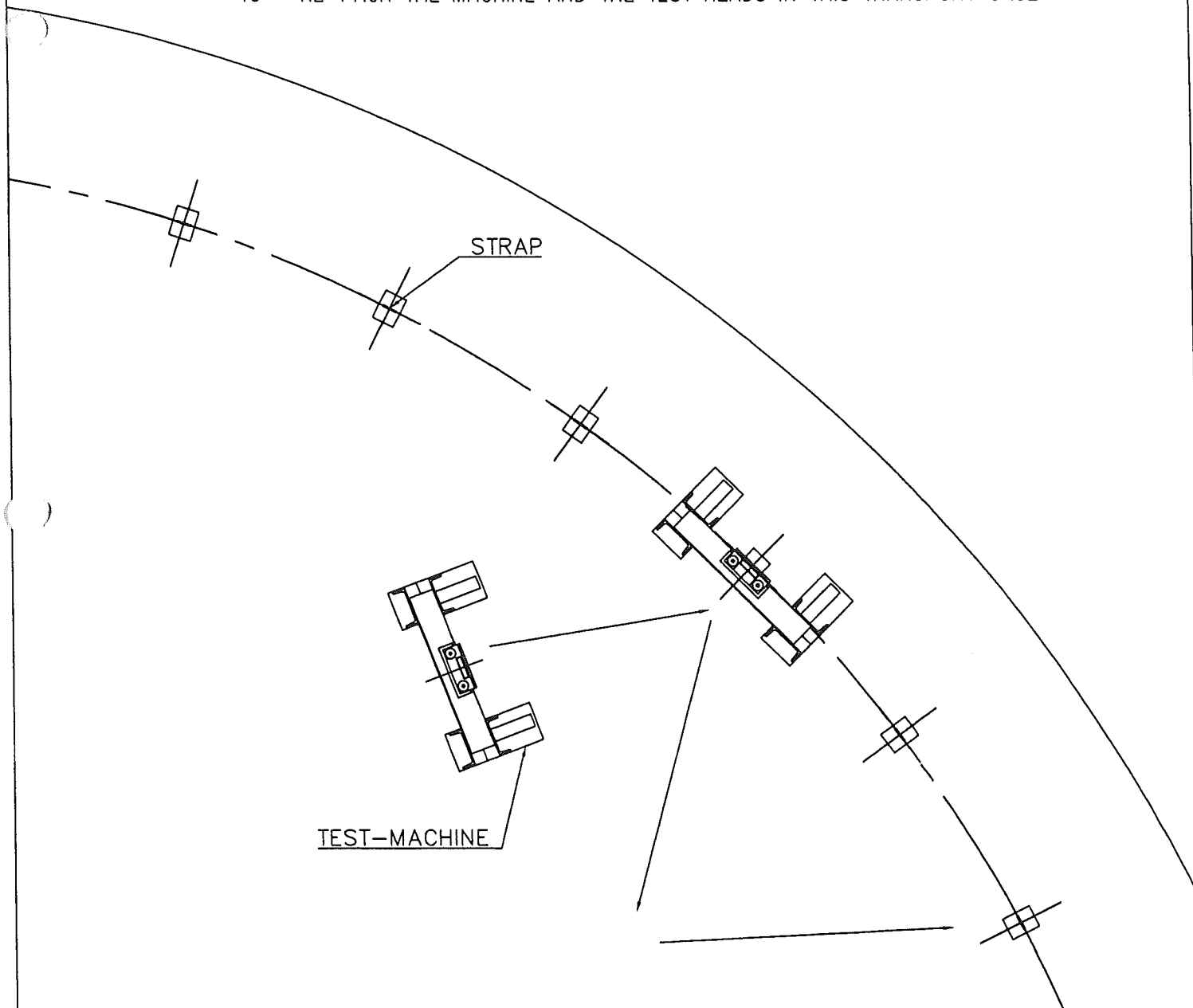
PARTIAL TOP VIEW



Echelle/Scale

/

- 15 - AFTER TESTS, CUT OFF THE TEST HEAD AND PROCEED WITH WELD PREPARATION
FOR INSTALLATION OF STRAP UPPER PARTS
16 - RE-PACK THE MACHINE AND THE TEST HEADS IN THIS TRANSPORT CASE



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CMP ORDER: 783/784

AIR LIQUIDE ORDER: ASU N°9 K 70101

SITE: KOSICE (SLOVAKIA)

DATE: 01/03/2005

REPORT N°02

FOLLOWING DOCUMENT CMP Arles N° 784-QP2 rev:A op: 1. 5

ACCORDING WITH SPECIFICATION CMP Arles N° 783-ANC-101 rev: 1

The followings anchors straps have been successfully tested:

- Located 5,625° : visual examination : Conform.(no cracks, no deformation)
- Located 95,625°: visual examination : Conform.(no cracks, no deformation)
- Located 106,875°: visual examination* : Conform.(no cracks, no deformation)
- Located 264,375°: visual examination : Conform.(no cracks, no deformation)

* CMP was also able to check the bottom part of this anchor(concrete slab door reservation)

This test was realised with Air Liquide and US/STEEL attendance.

DUFLOT Philippe
CMP Arles



SPECIFICATION

INSTALLATION OF LIN INNER TANK EMBEDDED PARTS

BON POUR EXECUTION
RELEASED FOR FABRICATION

1	17/11/04	D. LEBOUQCQ	G. HULIN	S. MARTIN	Modification of § INSTALLATION
0	16/11/04	D. LEBOUQCQ	G. HULIN	S. MARTIN	First issue / 1 ^{ère} édition
Rév.	Date	Etabli par Made by	Vérifié par Checked by	Approuvé par Approved by	Objet de la révision Revision's purpose

SPECIFICATION / SPECIFICATION

To define the installation work to be performed by the Civil-Engineering contractor

REFERENCE DOCUMENTS

- CMP's Civil Engineering Drawing 783-101
- This specification 783-SPANC101

COMPONENTS SUPPLIED

CMP will supplied 32 complete sub-assemblies including:

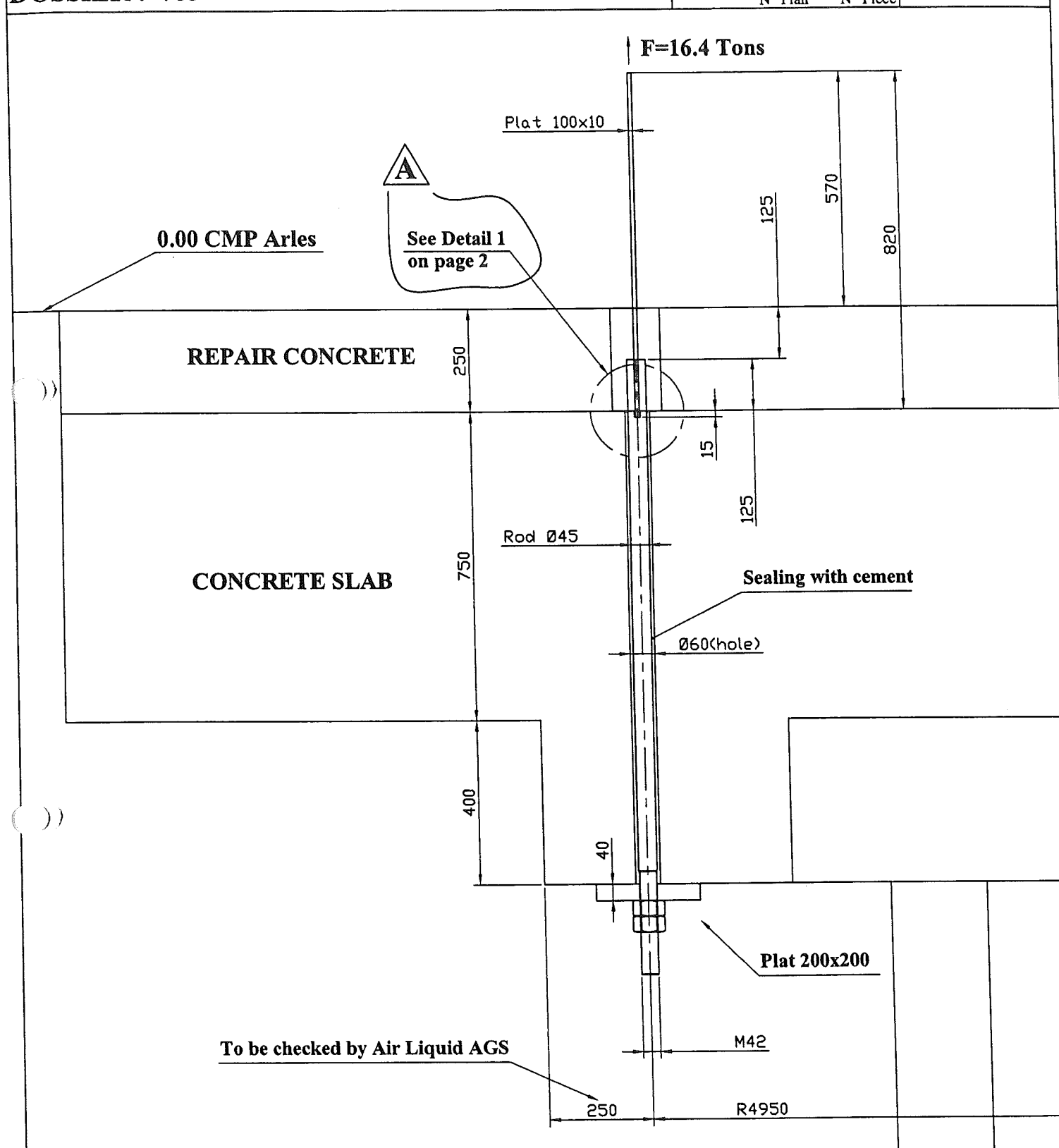
- 32 anchor straps 1a/1d according to folio 783-ST06
- 32 separate base plates 1b according to folio 783-ST06
- 64 nuts HM42 1c

INSTALLATION (see attached sketch 783-ANC-101)

1. Drill holes Ø 60 in the existing slab.
2. Perform the grooves according to page 2 of sketch 783-ANC101
3. Installation of anchor straps sub-assembly item 1a/1d
4. Installation of base plate item 1b directly in contact with the existing slab secured by associated nuts item 1c.
Tightening with a torque of approx 3 mkg.
Before installing this base plate check the concrete surface which shall be levelled and smooth
5. Sealing of the straps in the holes using cement
6. Pouring of the 250mm additional concrete on top of existing slab

CONTROL

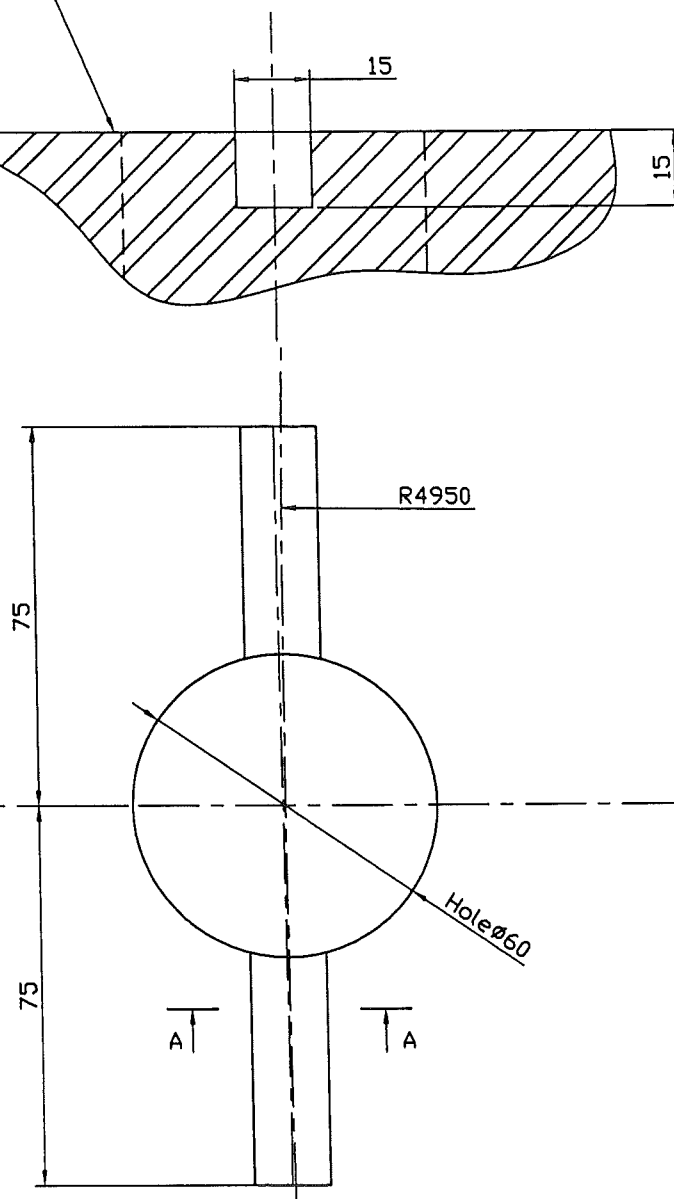
- Check the verticality of the straps before pouring the sealing concrete
- Dimensional according notes 4,6,7,8,9 of drawing 783-101
- Issuing of a report



A	17/11/04	Ajouté Detail 1	A. DUPRESSOIR	G. HULIN
0	16/11/04	Première émission	A. DUPRESSOIR	G. HULIN
Rév.	Date	Objet de la modification	REDACTEUR	VERIFICATEUR

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DETAIL 1
SECTION A-A
TOP OF EXISTING SLAB


0	17/11/04	Première émission	A. DUPRESSOIR	G. HULIN
Rév.	Date	Objet de la modification	REDACTEUR	VERIFICATEUR

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