	Wolf GmbH & Co.KG **57234 Wilnsdorf**	**Air Liquide Purchase-no.:** **4500023998** **Project: ASU Kosice No.9**
	Kom.Nr. 37106	**Dokument No. : 11441- 4-OI**

Document: **Operation Instruction**

Description: **Molsieve Filter**

Tag No.: **F15031**

Drawing No.: **11441- 0**

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Operating Instruction

(in accordance with Pressure Equipment Directive (PED) 97/23/EG, appendix I, Para. 3.4)

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Pressure Equipment: „Molsieve Filter F15031"

Purchaser: Air Liquide AGS GmbH,
Fütingsweg 34, D-47805 Krefeld, Germany

The Pressure Equipment „Molsieve Filter" may be used only for the application and for the procedure defined by the purchaser.

-Year of manufacturing:	2005
-Serial-No.:	25744

Basic Design Data (static internal pressure):

-allowable working pressure min./max.PS:	6 bar (g)
-allowable Temperature min./max. TS:	-10 / +120 °C
-Corrosion allowance:	3 mm
-Joint efficiency:	0,85
-Wind loads:	
-Test pressure PT:	
--Shop pressure test, horizontal position:	9.24 bar (g) (Water)
--Future pressure test, horizontal position, at top of vessel:	9,24 bar (g) (Water)
-Nominal capacity V:	4600 L
-Contents:	Air (Fluidgroup 1 acc. to art.9(2) of the PED)
-Empty weight of the vessel:	2 200 kg
- Operation weight of the vessel:	2 200 kg
- Test weight of the vessel:	6 800 kg
-Design Code:	AD2000-rules, PED 97/23/EC
-Post Weld Heat Treatment PWHT:	none

-External forces and moments on nozzle N1: FR=31500N, ML=27400 Nm, MC=22500 Nm.
-External forces and moments on nozzle N2: FR=31500N, ML=27400 Nm, MC=22500 Nm.

Basis of Design:

-The design acc. to AD 2000 rules and PED 97/23/EC performed by WOLF, was conducted for a static internal pressure of 6 bar(g) at a temperature of 120°C.
- Additionally, the nozzles loads N1 and N2 have been designed acc. to WRC 107-1979/03 for the before mentioned external forces and moments.

-The static design of stability have been performed by Wolf.

Corrosion protection:

-The vessel have been painted with the coating system stipulated by the purchaser.
inside: No coating
outside: Primer Coating 1K-Alkydharz, Zinkphosphat, DFT. 80µm (see drawing)

Erection/Mounting:

-During erection/mounting the " Molsieve Filter " may be forced only by the lifting devices intended for lifting (Lifting Lugs item 48 of the drawing no. 11441-0).
The " Molsieve Filter " is to handle, erect and fasten in such a manner that any additional forces or loads, which the operational safety can reduce, are avoided.
Any vibrations caused for example by external attachments, pipelines or valves are to avoid basically.

The " Molsieve Filter " is to anchor on the foundation by 4 anchor bolts 7/8".

-The maximum foundation loads, computed by Wolf within the static design of stability for operatio-, test- and mounting conditions, may not be overstepped.

The security of equipment parts must be proven by the equipment manufacturer. The pipelines for nozzles N1 and N2 are to design and to mount in such a way that the additional loads described on sheet 1 of this operating instruction are not overstepped.
It is not allowed to carry out any welding work, heat treatment or other work on pressure retaining walls which can affect the safety of the " Molsieve Filter ".
If the " Molsieve Filter " is damaged, it is to be put out of operation instantaneously and to introduce to an expert who, if necessary, have to inform the Notified Body for further measures.
Before start of dismantling of valves or similar attachments the overpressure is to bring down to atmospheric pressure.

Putting into operation/Use/Maintenance/Inspection:

-It is to be guaranteed that the " Molsieve Filter " is not exposed to a higher pressure than the max. allowable working pressure **PS**. Therefore the pressure gauge have to be set to max. 6 bar(g).
The Observance of this limit is to be guaranteed by means of periodical inspections.

-The stated operating temperature range must be observed strictly.

-The external design loads on nozzles N1 and N2 must not be overstepped.

-Inspections in order to observe the safety-related and proper condition of the internal surfaces as well as the thicknesses of the pressure retaining parts and welding seams are to be carried out periodical. The measured wall thicknesses must not be smaller than the wall thicknesses stated in the drawings, reduced by the corrosion allowance of 3 mm. Otherwise the " Molsieve Filter " is to be put out of operation instantaneously and to introduce to an expert of a Notified Body.

-Maintenance and inspections during operation of " Molsieve Filter " are generally in the responsibility of the user or national authority. Inspection periods are laid down in the national rules (Slovac Republic). This periods to be considered by the user for future periodic tests.
The method of testing (UT or RT) is to be defined also by national authority.

-Before start of maintenance and/or disassembling of the equipment, i. e. valves, the apparatus has to be offset in a temperatureless and pressureless condition

-The function of the safety valves and the pressure gauges is to examine periodical, but at least once a year.

-The customer is responsible for advising these instructions to the assemling, operating and maintenancing personal.
-The manufacturer does not overtake the responsiblity for damages caused by non-observing these instruction
-The instructions base on the manufacturer's practical and theoretical experiences. They do not release the customer from its responsibility for the operation and the security of this pressure apparatus as well as from the appropriate training for the personal.

Signature: _____ Date: 18.04.05
(Strake)