

Atlas Copco

Applied Compressor

And
Expander Technique

Cover Sheet

AIR LIQUIDE Order No.

Z13/4500024048

Codename

ASU Kosice

Atlas Copco Energas Order No.

572 37 318

Machine No.

14 - 2275

Machine type

Turbo Compressor

HL806-4-75

Project Leader

**Herr. M. SAUERBORN
(Dept. PT4)**

Telephone No.

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Final Customer

US Steel Kosice

Place of erection

SLOWAKIA

Konformitätserklärung **im Sinne der EG-Maschinen-Richtlinie 98/37/EG, Anhang II A**

Wir, die ATLAS COPCO ENERGAS GMBH, Am Ziegelofen 2 in D-50999 Köln, erklären hiermit in alleiniger Verantwortung, daß das Produkt

Maschine: **H-Serie Verdichter** **57237318 "ASU Kosice"**

Maschinentyp: **HL8-4-75** **Maschinen-Nr.:** **14-2275**

auf das sich diese Erklärung bezieht, den Anforderungen der EG-Maschinen-Richtlinie 98/37/EWG sowie - falls anwendbar - den Anforderungen aus der Richtlinie über die elektromagnetische Verträglichkeit 89/336/EWG mit der Ergänzung 92/31/EWG und - falls anwendbar - den Anforderungen aus der Niederspannungsrichtlinie 73/23/EWG und - falls anwendbar- der Druckgeräte richtlinie 97/23/EG entspricht.

Angewendete harmonisierte Normen:

EN 1012-1
EN 292-1
EN 292-2
EN 50081-2 (falls anwendbar)
EN 50082-2 (falls anwendbar)

Angewendete nationale/internationale technische Normen und Spezifikationen:

DIN VDE 0660/500/502/504 (falls anwendbar)

Konformität der
Fertigungsunterlagen mit
den in Frage kommenden
Richtlinien

Herstellererklärung **im Sinne der EG-Maschinen-Richtlinie 98/37/EG, Anhang II B**

Wir, die ATLAS COPCO ENERGAS GMBH, Am Ziegelofen 2 in D-50999 Köln, erklären hiermit in alleiniger Verantwortung, daß das Produkt ("die Teilmaschine")

Auftrag: H-Serie Verdichter 57237318 "ASU Kosice"
Maschinentyp: HL8-4-75 **Maschinen-Nr.:** 14-2275

- o zum Einbau in eine Maschine ("Gesamtmaschine")
- o zum Zusammenbau mit anderen Maschinen zu einer Maschine ("Gesamtmaschine")

im Sinne der EG-Maschinen-Richtlinie bestimmt ist.

Erklärung:

In die Entwicklung und den Bau der vorbeschriebenen Teilmaschine sind die nach dem Stand der Technik möglichen unmittelbaren Maßnahmen zur Erfüllung des auf diese Teilmaschine zutreffenden materiellen Inhalts der grundlegenden Sicherheits- und Gesundheitsanforderungen gemäß der EG-Maschinen-Richtlinie 98/37/EG mit den Ergänzungen 91/368/EWG, 93/44/EWG sowie - falls anwendbar - die Anforderungen aus der EMV-Richtlinie 89/336/EWG mit der Ergänzung 92/31/EWG und - falls anwendbar - die Anforderungen aus der Niederspannungsrichtlinie 73/23/EWG eingeflossen; ferner wurden die Forderungen der die o.g. Richtlinie ergänzenden Richtlinie 93/68/EWG beachtet. Eine entsprechende Dokumentation wird bei ausreichend begründetem Verlangen der für die Durchführung der EG-Maschinen-Richtlinie zuständigen nationalen Behörden in angemessener Zeit verfügbar gemacht.

Hinweis:

Der Hersteller der verwendungsfertigen Maschine ("

EC Declaration of Conformity
as defined by EC machinery directive 98/37/EG, Annex II A

We, ATLAS COPCO ENERGAS GMBH, Am Ziegelofen 2 in D-50999 Köln, declare in our sole responsibility that the product

Machine: **H-series compressor** **57237318 "ASU Kosice"**

Machine type: **HL8-4-75** **Serial No.:** **14-2275**

to which this declaration relates, is in conformity with EC machinery directive 98/37/EC and all amendments (former 89/393/EEC) and - if applicable - with the provisions of the EC directive governing electromagnetic compatibility 89/336/EEC and its supplements 92/31/EEC, 91/263/EEC and - if applicable - with the provisions of the low-voltage directive 73/23/EEC and - if applicable - with the provisions of the pressure equipment directive 97/23/EG.

Applied harmonized standards:

EN 1012-1
EN 292-1
EN 292-2
EN 50081-2 (if applicable)
EN 50082-2 (if applicable)

Applied national technical standards and specifications:

DIN VDE 0660/500/502/504 (if applicable)

Conformity of production
documents with machinery
directive

Conformity of finished machine
with production documents

**Declaration by the manufacturer
as defined by EC machinery directive 98/37/EG, Annex II B**

Herewith, we, Atlas Copco Energas GmbH, Am Ziegelofen 2 in D-50999 Köln, declare in our sole responsibility that the product ("the partial machine")

Order: **H-series compressor** **57237318 "ASU Kosice"**

Machine type: **HL8-4-75** **Serial No.:** **14-2275**

- o incorporated into machinery ("complete machine")
 - o assembled with other machinery to constitute machinery ("complete machine")
- as defined by the above mentioned EC machinery directive.

Declaration:

In the development and production of the above described partial machine, all direct feasible state-of-the-art measures have been considered to meet the substantive contents of the basic safety and health requirements pertinent to this partial machine as defined in EC machinery directive 98/37/EC and all amendments (former 89/392/EEC) and - if applicable - the provisions of the EC directive governing electromagnetic compatibility 89/336/EEC and its supplements 92/31/EEC, 91/263/EEC and - if applicable- the provisions of the low-voltage directive 73/23/EEC. Furthermore, the provisions of directive 93/68/EEC which is a supplement to the a.m. directives have been complied with. Pertinent documentation will be made available to the competent national authority in charge of the execution of the EC machinery directive on sufficiently justified request within a reasonable period of time.

Note:

The manufacturer of the ready-for-use machinery ("complete machine")

We, ATLAS COPCO ENERGAS GMBH, Am Ziegelofen 2 in D-50999 Köln, herewith declare that the product/s described below

Machine description: Turbo Compressor 53737318 "ASU Kosice"

Machine type: HL 806-4-75 Serial No. : 14-2275

has/have been manufactured in terms of article 1. (2.1.5) of the PED in compliance with the following conformity assessment procedure(s):

Category IV, Module B&D (directive 97/23/EC)

Notified body:
(Or, if required, notified body
monitoring the QA system)

Lloyd's Register Quality Assurance GmbH
Benannte Stelle für Druckgeräte
Mönckebergstr. 27
D-20095 Hamburg
0525

Identification No:

No. of EC type examination certificate: SIG 0271737/2

No. of Quality Management System : 50031/1

Refer to the enclosed classification list for the single pressure equipment items of which the entire functional

	CLASSIFICATION LIST ACCORDING TO EC-DIRECTIVE 97/23/EC -PED	Atlas Copco Energas GmbH
	List of systems / sub-assemblies with included pressure equipment	

Customer Order No. **Z13/4500024048**
 ACE Order No. **572 37 318**
 Codename **ASU Kosice**
 Machine Type **HL806-4-75**
 Machine No. **14-2275/14-2276**
 Item No.

Category (Highest)

IV

ACE-conformity assessment procedure for assembly and protection of the system

B+ D

Checked (Project leader) M. Sauerborn
 Revision checked (Quality Control): H. Hammermann
 Date: 06.03.2006
 Date:

Atlas Copco
 Energas GmbH


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List of systems / sub-assemblies with included pressure equipment

Version 5.0 from 22.01.2004

Sys.No.	Description:	Medium	Fluid	Protection					
1	Gas, 1. Stage	N2	2	Temperature					
Pressure equipment									
Pos.-No.:	Description	Part no.:	Pressure Design. /Operation	Temperature Design. / Operation	Category	Module	NB	Manufact.	Purch.
1	Gas piping outlet 1. stage	6970301462	8,0 / 1,5 bar(g)	200 °C / 125 °C	II	D1	TUEV 0035	☐	☒
2	Gas cooler 1. stage (air side)	6970301457	7,5 / 1,5 bar(g)	150 °C / 125 °C	IV	G	TUEV Süd (0036)	☐	☒

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CLASSIFICATION LIST ACCORDING TO EC-DIRECTIVE 97/23/EC -PED

Atlas Copco Energas GmbH

Version 5.0 from 22.01.2004

List of systems / sub-assemblies with included pressure equipment

Sys.No.	Description:	Medium	Fluid	Protection					
2	Gas, 2. Stage	N2	2	Temperature					
Pressure equipment									
Pos.-No.:	Description	Part no.:	Pressure Design. /Operation	Temperature Design. / Operation	Category	Module	NB	Manufact.	Purch.
1	Gas piping inlet 2. stage	6970301462	8,0 / 1,5 bar(g)	200 °C / 21,11 °C	II	D1	TUEV 0035	☐	☒
2	gas piping outlet 2. stage	6970301462	8,0 / 3,6 bar(g)	200 °C / 96 °C	II	D1	TUEV 0035	☐	☒
3	Gas cooler 2. stage (air side)	6970301457	7,5 / 3,6 bar(g)	150 °C / 96 °C	IV	G	TUEV Süd (003		

CLASSIFICATION LIST ACCORDING TO EC-DIRECTIVE 97/23/EC -PED

Atlas Copco Energas GmbH

Version 5.0 from 22.01.2004

List of systems / sub-assemblies with included pressure equipment

Sys.No.	Description:	Medium	Fluid	Protection					
3	Gas, 3. Stage	N2	2	Temperature					
Pressure equipment									
Pos.-No.:	Description	Part no.:	Pressure Design. / Operation	Temperature Design. / Operation	Category	Module	NB	Manufact.	Purch.
2	Gas piping inlet 3. stage	6970301462	8,0 / 3,6 bar(g)	200 °C / 42,2 °C	II	D1	TUEV 0035	☐	☒
5	Gas piping outlet 3. stage	6970301462	12,0 / 6,4 bar(g)	200 °C / 102,6 °C	II	D1	TUEV 0035	☐	☒
7	Gas cooler 3. stage (air side)	6970301463	12,0 / 6,4 bar(g)	150 °C / 102,					

CLASSIFICATION LIST ACCORDING TO EC-DIRECTIVE 97/23/EC -PED

Atlas Copco Energas GmbH

Version 5.0 from 22.01.2004

List of systems / sub-assemblies with included pressure equipment

Sys. No.	Description:	Medium	Fluid	Protection					
4	Cooling water	Water	2	Temperature					
Pressure equipment									
Pos.No.	Description	Part no.:	Pressure Design. / Operation	Temperature Design. / Operation	Category	Module	NB	Manufac	Purch
1	Piping	6970301459	10,0 / 2,5 bar(g)	95 °C / 37 °C	Article3 / Section3	-	-	☐	☒
2	Gas cooler (water side cooler Stage 1)	6970301457	8,0 / 2,5 bar(g)	80 °C / 37 °C	IV	G	TUEV Süd (0036)	☐	☒
3	Gas cooler (water side cooler Stage 2)	6970301457	8,0 / 2,5 bar(g)	80 °C / 37 °C	IV	G	TUEV Süd (0036)</		

List of systems / sub-assemblies with included pressure equipment

Version 5.0 from 22.01.2004

Sys. No.	Description:	Medium	Fluid	Protection					
4	Cooling water	Water	2	Temperature					
Pressure equipment									
Pos.No.	Description	Part no.:	Pressure Design. / Operation	Temperature Design. / Operation	Category	Module	NB	Manufac	Purch
6	Non-return flap	6915231545	16,0 / 2,5 bar(g)	120 °C / 37 °C	Article3 / Section3	-	-	☐	☒
7	Non-return flap	6915231543	16,0 / 2,5 bar(g)	120 °C / 37 °C	Article3 / Section3	-	-	☐	☒
8	Non-return flap	6915103623	10,0 / 2,5 bar(g)	90 °C / 37 °C	Article3 / Section3	-	-	☐	☒
8	Flexible tube	6970252997	16,0 / 2,5						



CLASSIFICATION LIST ACCORDING TO EC-DIRECTIVE 97/23/EC -PED

Atlas Copco Energas
GmbH

Version 5.0 from 22.01.2004

List of systems / sub-assemblies with included pressure equipment

Syst. Nr. Sys. No.:	Bezeichnung: Description:	Medium Medium	Fluid Fluid	Absicherung Protection
8	Instruments	Water , Oil , Process gas	2	Temperature
Pressure equipment				
19	PT 6548	200 / 6,4 bar(g)	120 °C / 25 °C	Article 3 / Section 3
		6970308673	-	☐
			-	☒

Legende:

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List of systems / sub-assemblies with included pressure equipment

FE	Orifice
FT	Diff. Pressure Transmitter
PCV	Pressure Control Valve
PSV	Safety Valve
PI	Pressure Gauge
PT	Pressure Transmitter
PDGS	Diff. Pressure Switch
PICV	Air Supply Station
PSLL	Pressure Switch
TCV	Temperature control valve
TE	Temperature Transmitter- PT100
ZC	Positioner



Atlas Copco Energas GmbH

Gas and Process

3 Components & inspections/Komponenten & Prüfungen

Title/Benennung Inspection and test plan Qualitätsplan	Type/Typ H compressor/H-Verdichter	Document number/Zeichnungsnummer 6970 3014 85 Revision 2 from Nov 28th 2005	Page/Seite 5 of/von 32
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3.2 Core Unit/Rumpfverdichter

3.3 Piping and components/Rohrleitungen und Einbauten

3.3.4 Oil piping/Ölleitung

CHAPTER 5

Part/Bauteil Oil piping/Ölleitung													
Material/Material				Design code acc. PED		Part number/Materialnummer 6970 301451							
No.	Inspection	Prod.-Stage	Procedure	Amount	Acceptance	Cert	Included	Sub-Suppl.	ACE	Customer	Enduser	TPIA	Note
1.1	Chemical analysis <i>Chemische Analyse</i>	RM				2.1	Y	X					
1.2	Mechanical properties <i>Mechanisch-technologische Eigenschaften</i>	RM				2.1	Y	X	R				
1.3	Radiographic inspection <i>Röntgenprüfung</i>	FM	QSV-QP-3	10% random for $d \geq 1"$	QSV-QP-3	3.1	Y	X	R				
1.4	Hydrostatic pressure test <i>Hydraulische Druckprüfung</i>	AS	QSV-QP-7										



3.4 Control system/Steuerung-&Regelungssystem

3.5 Silencer&filter/Schalldämpfer&Filter

