

Manufacturer: **FABER INDUSTRIE SPA - CIVIDALE DEL FRIULI - UDINE- ITALY**

Inspection: **BUREAU VERITAS**

Specification: **EN 1964-1:1999 (PED)**

Customer: **SCUBAPRO UWATEC**

Manufacturer serial No. :

From **10/0892/001** to **10/0892/202**

Gas: **1002 AIR**

Total cylinders: **200**

Type of cylinder: **Seamless steel gas cylinders**

Material: **34CRMO4**

Working pressure at 15° C: **232 bar**

Working temperature: **-50° ± +65° C**

Nominal data

Drawing no.	Test Pressure (bar)	Minimum Thickness		Nominal Diameter (mm)	Nominal Length without valve (mm)	Nominal Water Capacity (l)	Nominal Weight (Kg)
		wall (mm)	base (mm)				
EN-203-372-890 REV.1	372	5.3	5.3	203	620	15	18.2

We hereby certify that the cylinders of the batch no. **10/0892** comply with the following requirements

Manufacturing process: cylinders manufactured from **plate**

Neck thread : **M25X2 EN 144-1 2000**

Identification marks stamped on cylinders shoulder according to drawing: **PPED004 2**

Minimum cylindrical shell thickness:

The wall thickness of all cylinders has been measured and found to be not less than : **5.3 mm**

Hardness range:

All cylinders have been controlled within the following hardness values: Min **298 HB**, Max **354 HB**

Heat treatment:

All cylinders have been heat treated at the following temperatures:

Liquid quench: **900 °C ± 20 °C**

Temper at: **570 °C ± 30 °C**


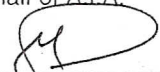
Chemical analysis:

Material: **34CRMO4**

The cylinders of the batch no. **10/0892** have been manufactured from the following cast(s) of steel:

Cast Numb.	Code (*)	C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Mo (%)	S+P (%)
84184	CPV	0.36	0.24	0.74	0.008	0.005	1.04	0.23	0.013

(*)marked on outer bottom surface

Date: 27/04/2010	For and on behalf of the manufacturer: 	For and on behalf of A.I.A. 
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MEASUREMENTS OF SAMPLE CYLINDERS:

Cylinder Serial no.	Water Capacity (L)	Empty Weight (Kg)	Minimum measured thickness	
			of the wall (mm)	of the base (mm)
10/0892/201	15	17.40	5.5	6.2
10/0892/202	15	17.40	5.5	6.2

MECHANICAL TESTS CARRIED OUT ON SAMPLE CYLINDERS:

Cylinder Serial no.	Code (*)	Test piece dimension (mm)	Yield strength (MPa)	Tensile strength (MPa)	Elongation (%)	Impact test -50°C			Bend test 180° without cracking
						Direction	Individual (J/cm ²)	Mean (J/cm ²)	
10/0892/201	CPV	9.9 x 5.7	958	1052	16.3	TRASV	39 39 37	39	SATISF.
Minimum values specified			890	990	14		28	35	

BURST TESTS CARRIED OUT ON SAMPLE CYLINDERS:

Cylinder Serial no.	Code (*)	Hydraulic burst test bar	Description of the fracture
10/0892/202	CPV	635	LONGITUDINAL
Minimum values specified		596	

For and on behalf of the manufacturer:

Faber
INDUSTRIE S.p.A.

For and on behalf of A.I.A.