

EQUIPMENT FOR SS 80

(3S80-000-3)

A SPECIFICATION

The ss 80 is equipped with two horizontal dipoles (4C02-100-3) and a Riber sector-valve downstream (F. Rohner, P. Riboni).

1. The requirements for precision and stability of alignment for any of these elements is :

$$\left\{ \begin{array}{l} \pm 1 \text{ mm radially,} \\ \pm 0,5 \text{ mm vertically,} \\ \pm 1 \text{ mrad in angle perpendicular to the beam.} \end{array} \right.$$

It follows that the precision of the initial installation (because of the rigidity of the supporting structure) is only a fraction of the given values.

2. The horizontal dipoles are split magnets, which allow the mounting of the dipoles in the PS ring, independently of the vacuum chamber.

3. The sector valve is welded into the vacuum chamber. The vacuum chamber is of standard type with standard two-point quick-couplings up and downstream.

4. The dipoles and the vacuum chamber with the sector-valve are sitting on a main support, each element having its individual aligning system.

5. The main support is aligned in height to $\pm 0,2$ mm in the PS ring by means of shims. The dipoles are adjusted to the required height in the laboratory. The angular and radial movements are done in the ring after mounting the dipoles on the main support.

6. At first, the vacuum chamber with the sector-valve has to be built in and aligned. Then the split dipoles are assembled in situ and aligned.

B ALIGNMENT AND ASSEMBLY PROCEDURE

a) Work in the laboratory and workshop

1. Assembly of the horizontal dipoles on their individual support mechanisms.
Alignment in horizontal plane with shims : $\pm 0,2$ mm.
2. Welding of the vacuum chamber with the sector-valve (3A65-705-4).
3. Vacuumtest of assembly.

b) Work in the PS ring

1. Installation and alignment of the main support by means of shims. The reference-faces are the two rails on top of the bedplate.

Alignment in horizontal plane : $\pm 0,2$ mm with spirit levels and for the absolute height the surveyors.

Radial positioning : ± 2 mm with jig (3T04-000-S4)

Drawing : 4C02-600-3.

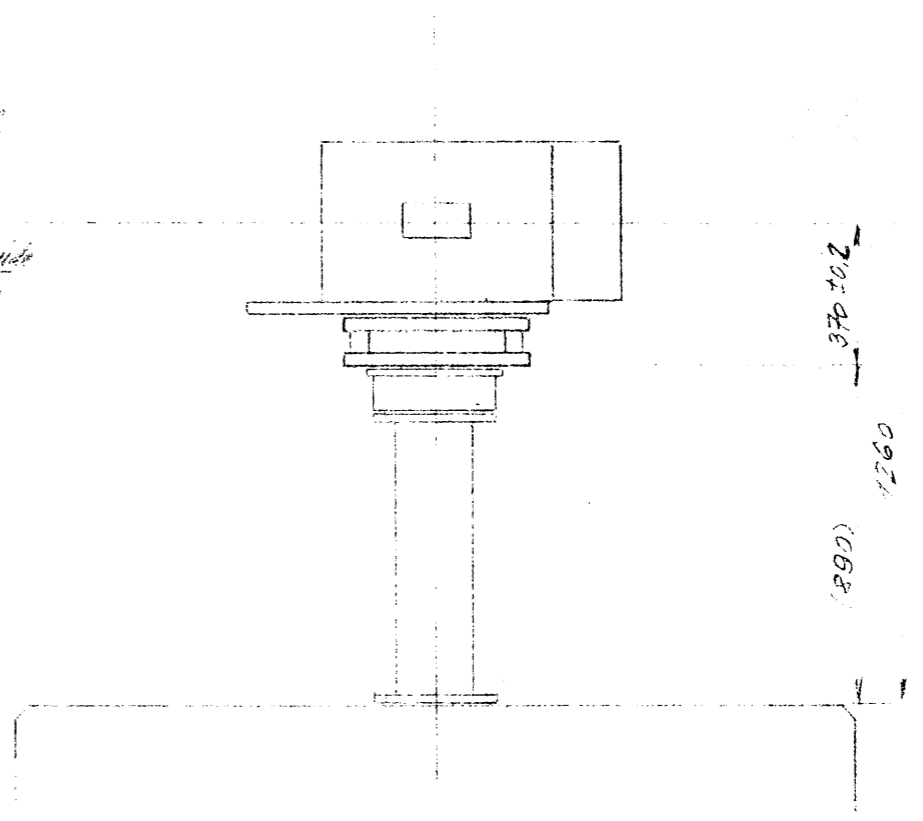
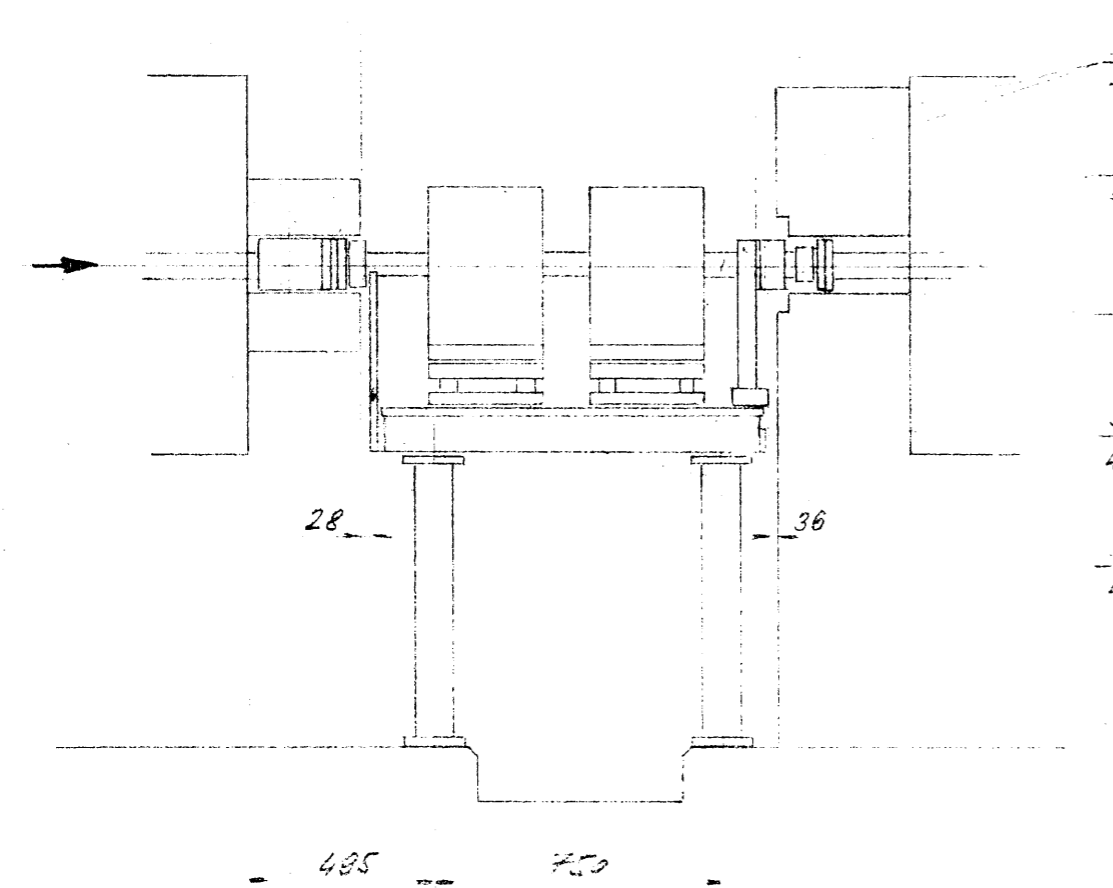
2. Mounting of the vacuum chamber with the sector-valve on the main support.
3. Mounting of the dipoles.
4. Alignment of elements in radial sense with a jig (4T-002-2).

ANNEX : 3580-000-3.

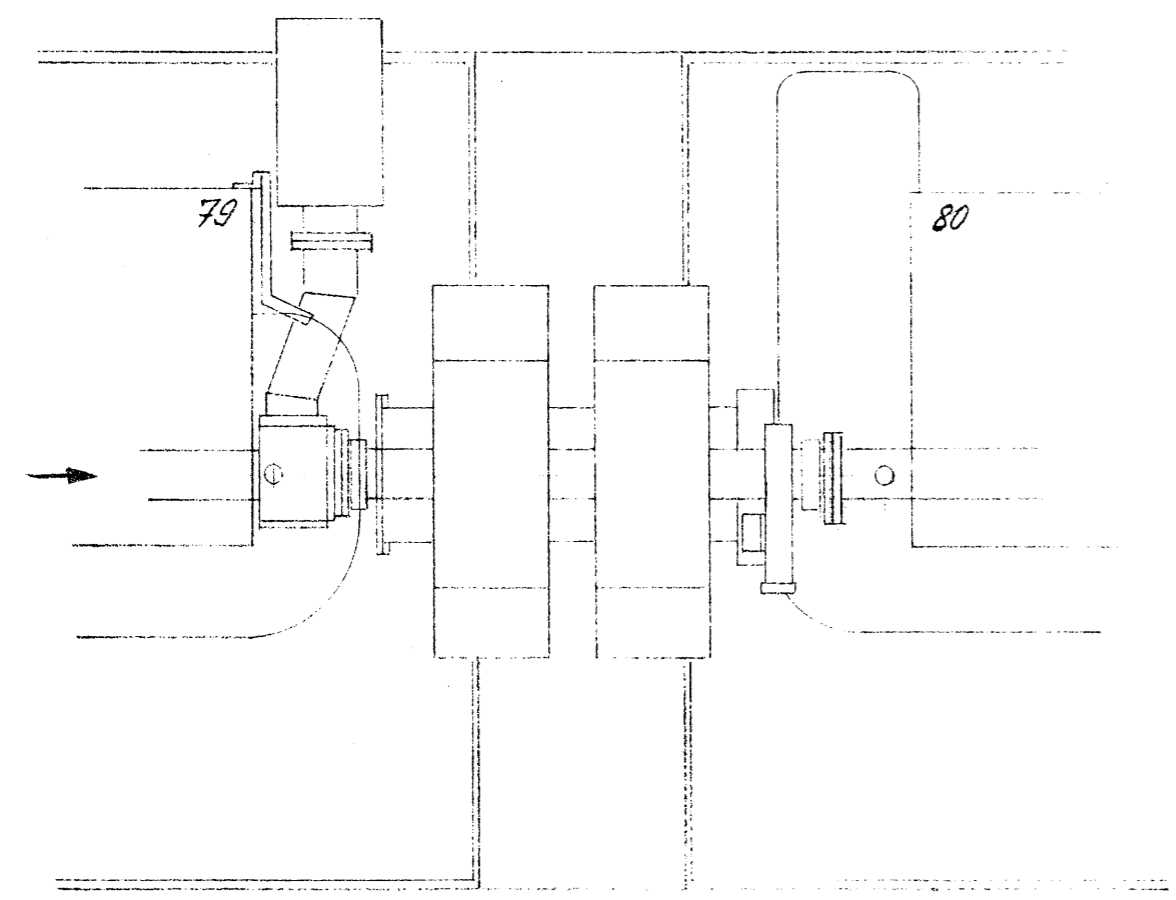
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aboutissement du goujon pr. dipôle hor. 4T.002.2



NOMBRE DE PIÈCES	DÉSIGNATION	POS.	MATIÈRE	OBSERVATIONS			
	s.d. 80	Dipôles hor. Vanne à secteur			ECHELLE	DESSINÉ	12.71
					CONTROLÉ	16.12.71	M...
					VU		
					REPLACE		
					REPLACÉ PAR		
					RÉDUCTION		

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M.P.S. 3580.000.3