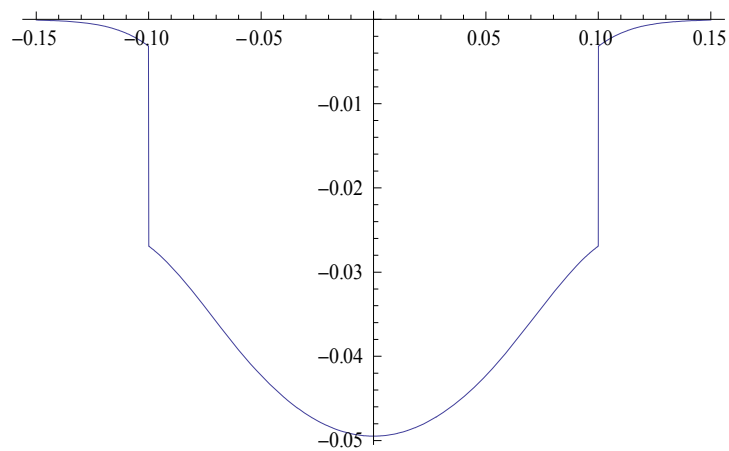


Field delay due to eddy currents in a corrugated vacuum chamber inside the BS magnets

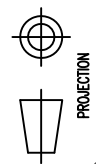
The field delay due to eddy currents in a vacuum chamber for a out of vacuum BS magnet were estimated by M. Channel. As a base the out of vacuum BS magnet used for the calculations of the effects of the eddy currents in the laminations in the previous meeting was used. This meant that a magnet gap of 80 mm is assumed. The corrugated vacuum chamber of measures 67 mm x195 mm internally and 78 mm x 206 mm on the outside, made in a similar fashion as the PS bumper vacuum chamber (see drawing next page). The dB/dt was chosen 740 mT/ms.

The delay calculated is 67 μ s, with the field deformation along the horizontal axis in the midplane is shown below (x axis position in m, vertical axis field in T):

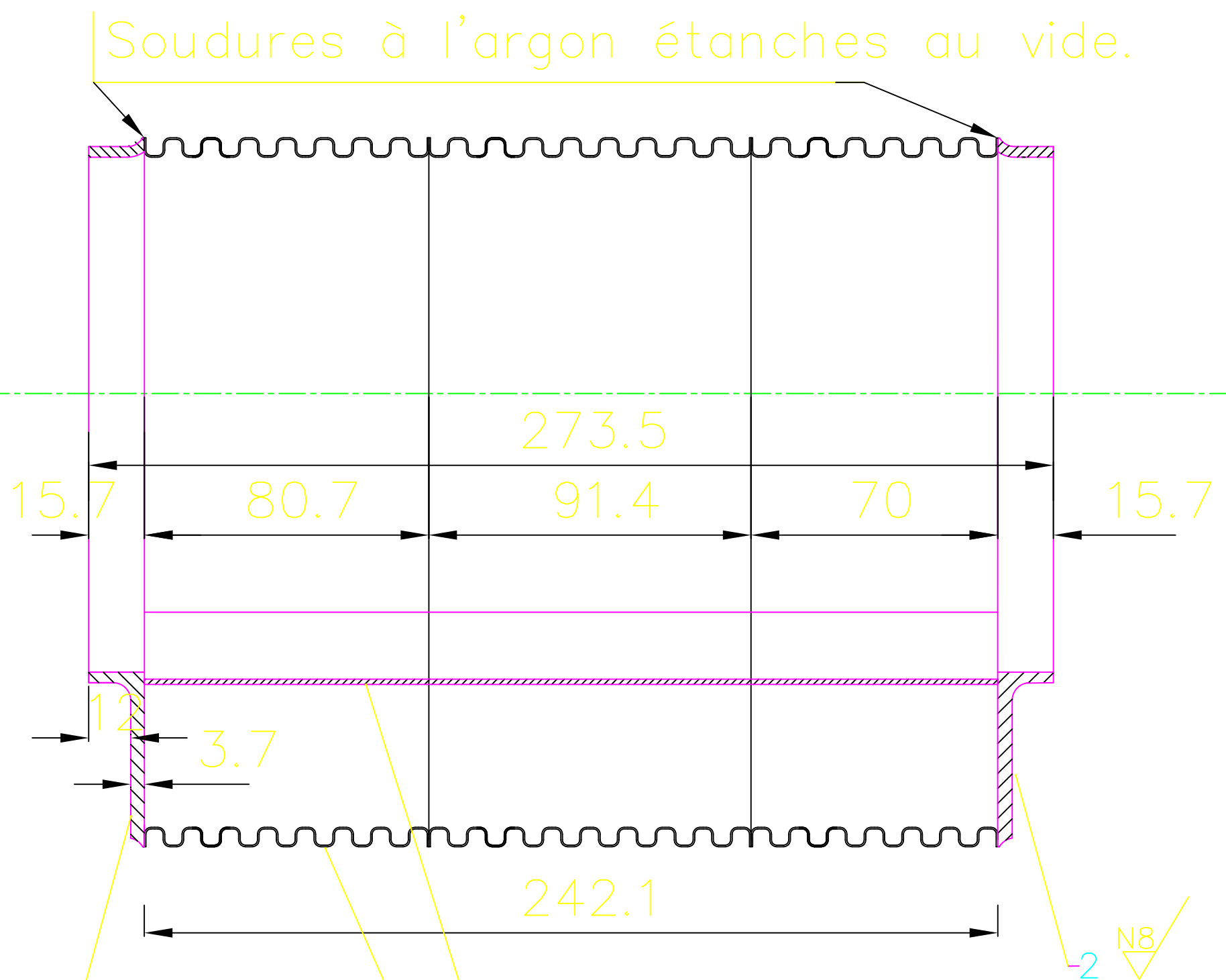
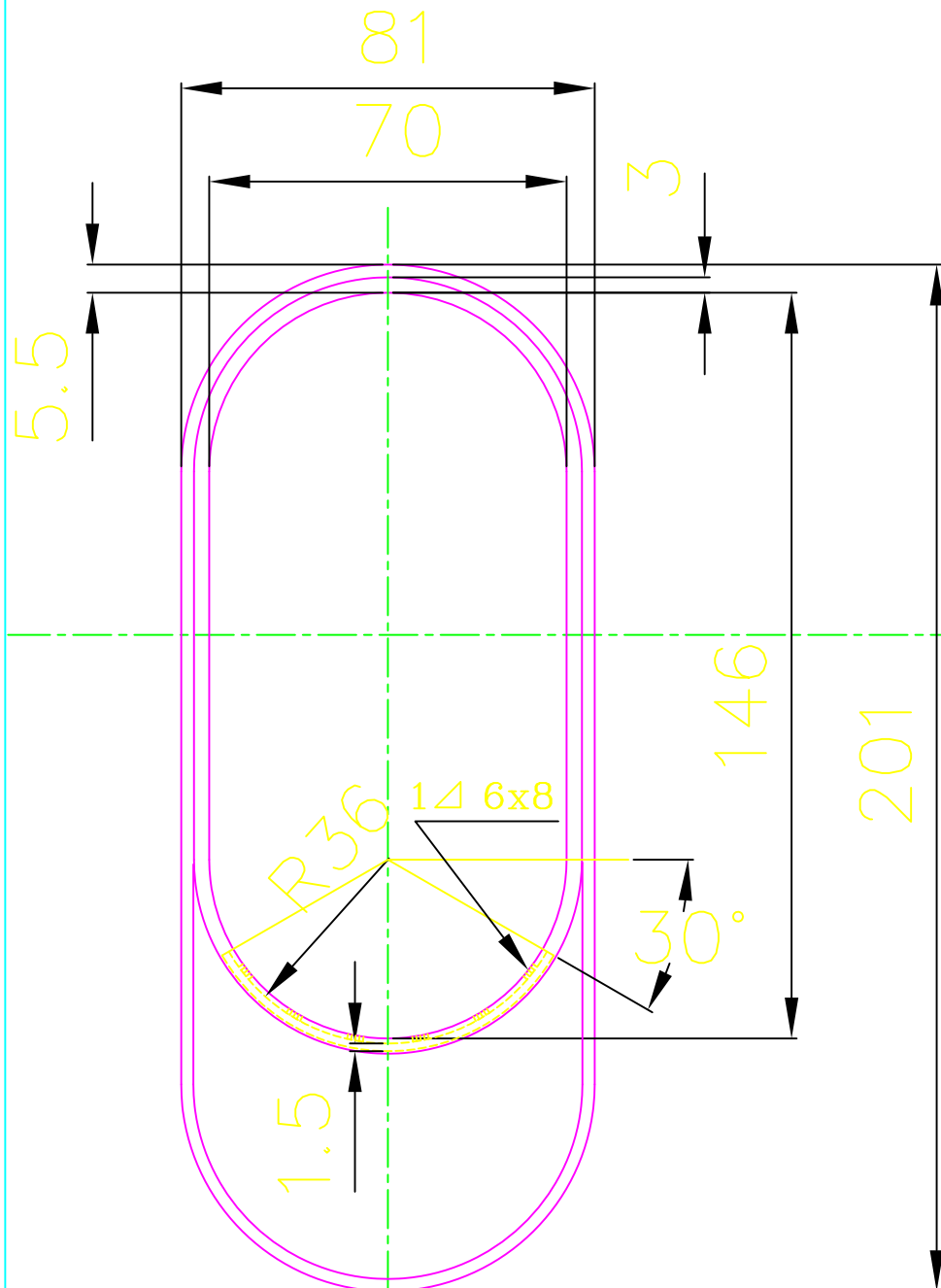


DIMENSION	<=6	> 6	> 30	> 120	> 315	>1000	>2000
USINAGE MOYEN/MEDIUM MACHINING	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2
MECANO. SOUDURE/WELDED STRUCTURE	± 0.5	± 1	± 2	± 3	± 5	± 7	± 10

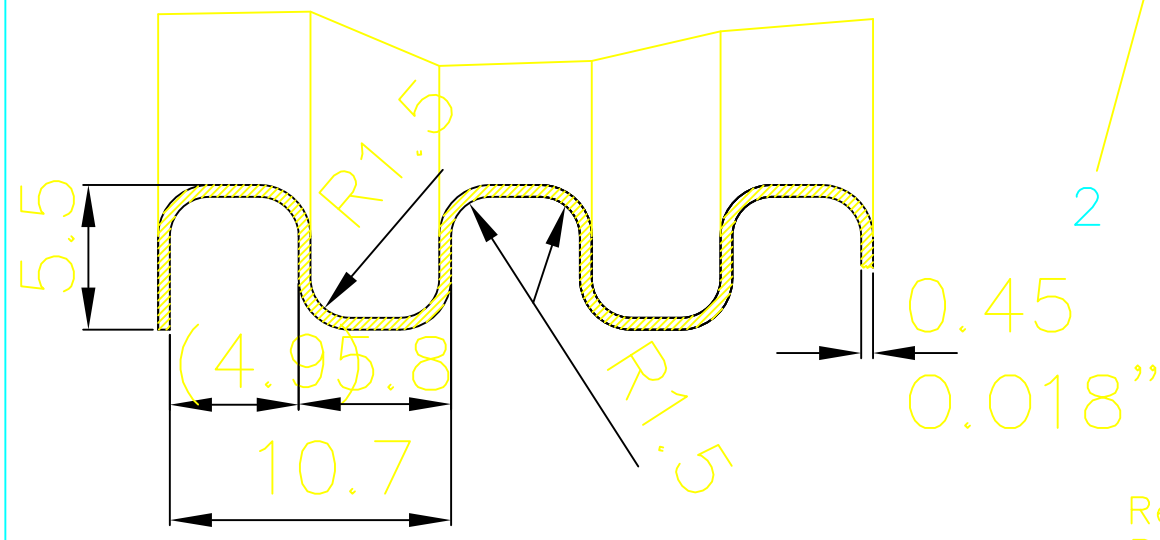
DESSIN, RUGOSITE, TOLERANCES
SELON NORMES ISO
DRAWING, RUGOSITY, TOLERANCES
ACCORDING TO ISO STANDARDS



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Soudures à l'argon étanches au vide.



Resistivité Inconel X750 $\rho = 121 \mu \text{ cm}^2/\text{cm}$
Resistance de la chambre = $94 \mu / \text{cm}$

1	Tôle renfort 1.5x 242x78	3	Inconel 750 ou 600		
2	EMBOUT	2	TYPE 316LN		
1	CHAMBRE ONDULEE	1	INCONEL x750	chambre exist.PS-3A-216-2 à mod.	
QUANT.	DESCRIPTION	POS	MAT.	OBSERVATIONS	REF.CERN
ENS/ASS		PS.PA.9253.2		S.ENS/S.ASS	
PS INJECTION SD.42					
ECHELLE SCALE			1:1		
DES/DRA.	H.STUCKI		DATE 1994-06-09		
CONTROL.					
APPRO.					
REPLACE/REPLACES					
NON VALABLE POUR EXECUTION NOT VALID FOR EXECUTION			PS PA 9254.2		IND. B

B	1994-08-17	H.Stucki		Soufflet 146x70--->190x70, ajouté pos.3
IND.	DATE	NOM/NAME	ZONE	MODIFICATION