FEW COMMENTS on the two "preliminary" proposed solutions by the CMAs:

1. "Preliminary Solution" proposed by ASC and BNN:
   - Symmetric configuration with 50 μm shim in each quadrant.
   - Preliminary estimation of material cost: ~ 100 CHF/c.m.
   - Preliminary estimation of work: ~ 100 CHF/c.m.

2. "Preliminary Solution" proposed by Alstom:
   - Asymmetric configuration with 125 μm shims every two quadrant (upper and lower).

   (NOTE: 125 μm is chosen because is a standard polyimide thickness (like the 50 μm). We are ordering tons of polyimide with this thickness from Kaneka (for the ground insulation); we expect to obtain a better price respect to the other solution).

   Preliminary estimation of material cost: ~50-70CHF/c.m

   (NOTE: a 100 μm (not standard) thickness will cost ~ 200 CHF/c.m.)
   - Preliminary estimation on work not done by Alstom (they want to test before, serious attitude!) but cannot be more expensive of the other one.

3. Mid-plane shim width: $31.0^{\pm 0.25}$ mm (coils nom. dim. 31.4 mm)

4. Shims will be not adhesive (risk of wrinkles is too high); few spot of glue could fix them.

5. It must be tested the correctness of the "asymmetric" proposal (Alstom one), in theory it should be working (correct positioning of the coils is driven by collars cavity), but friction is also present.

6. In parallel it will be convenient to decrease the nominal values of the collaring shims of 50μm, on the inner and on the outer layer (to re-centre the prestress tolerance and to avoid eventual problems at premises were collaring presses are working close to the limit).

M.Modena, 08/04/2003

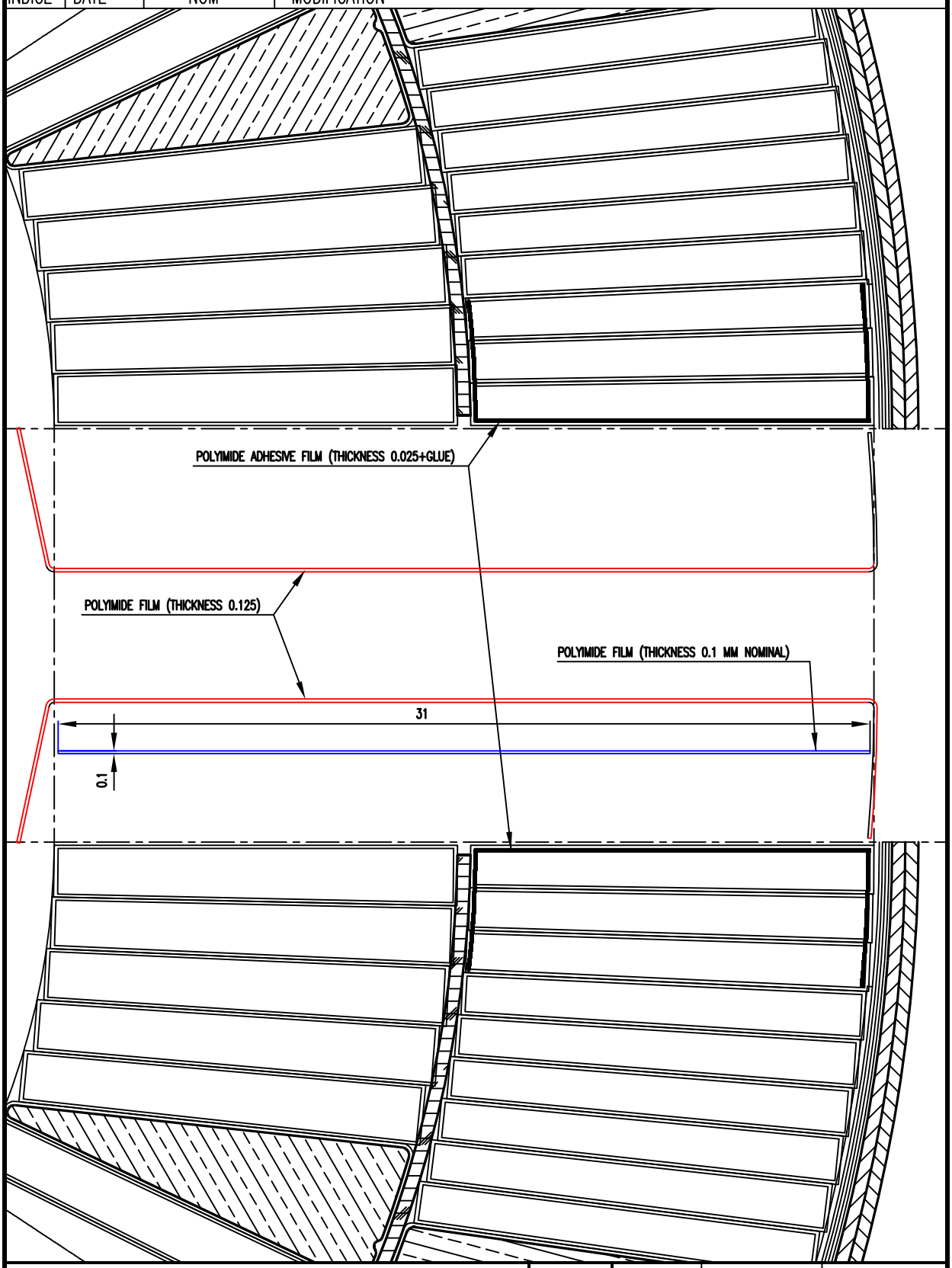
INDICE	DATE	NOM	MODIFICATION

GENERAL TOLERANCES GENERALES								
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**

PROJECTION



ORGANISATION EUROPEENNE POUR LA RECHERCHE NUCLEAIRE
EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH
GENEVE

MAG. BEND. MANUFACT. SERIES ACTIVE PART St.st.

MAGNETIC FIELD IMPROVMENT PROPOSAL ALSTOM VERSION

PROPOSITION POUR OPTIMISATION DU CHAMP MAG. VERSION ALSTOM

ECHELLE SCALE 5:1

DES/DRA.	ROSSI/MODENA/MARTINS	2003-04-07
CONTROLLED		
RELEASED		
APPROVED		

MAG__FIELD__IMPR__ALST__A4.dwg

REMPLACE/REPLACES

NON VALABLE POUR EXECUTION
NOT VALID FOR EXECUTION

QAC —

LHCMB__A

SIZE 4

IND.

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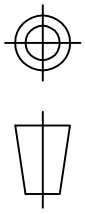
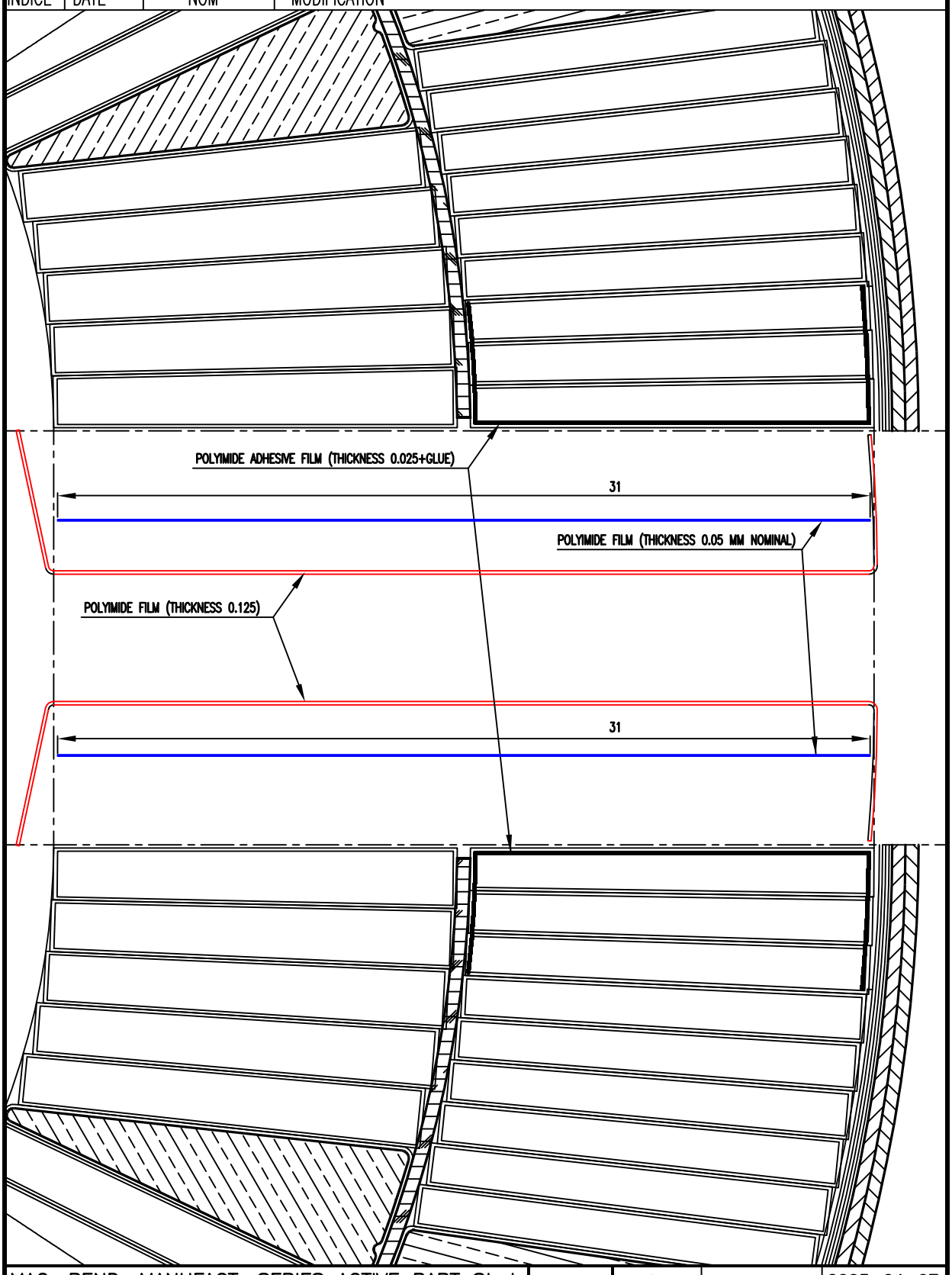
PROJECTION





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