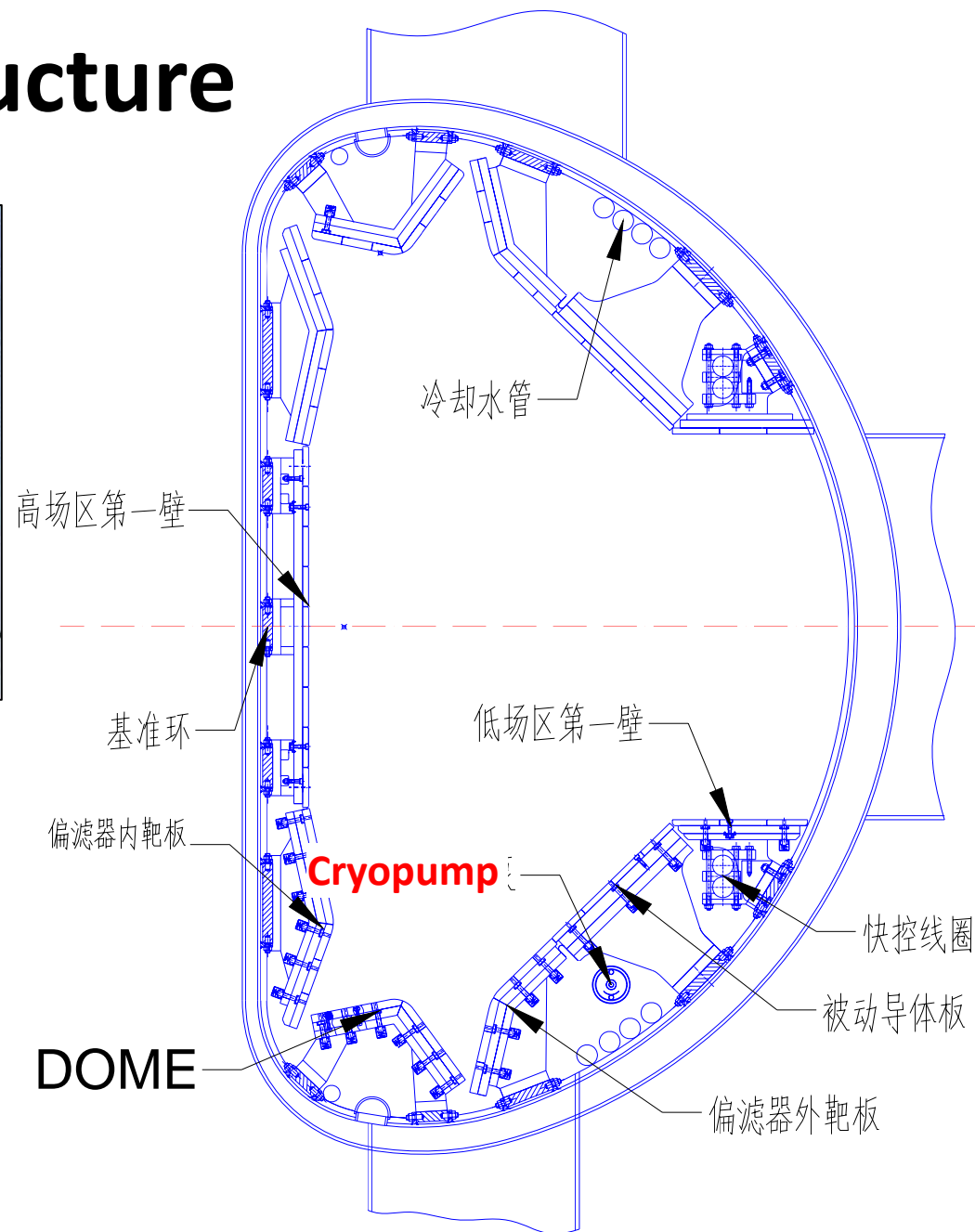
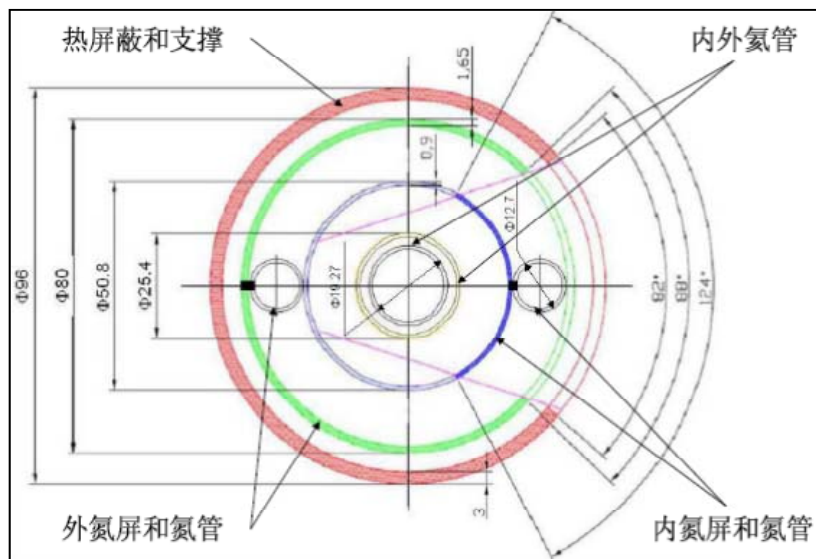
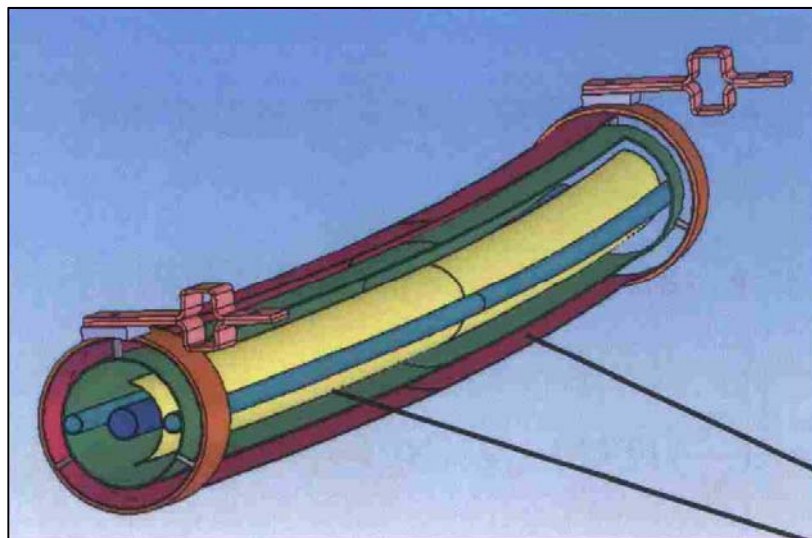


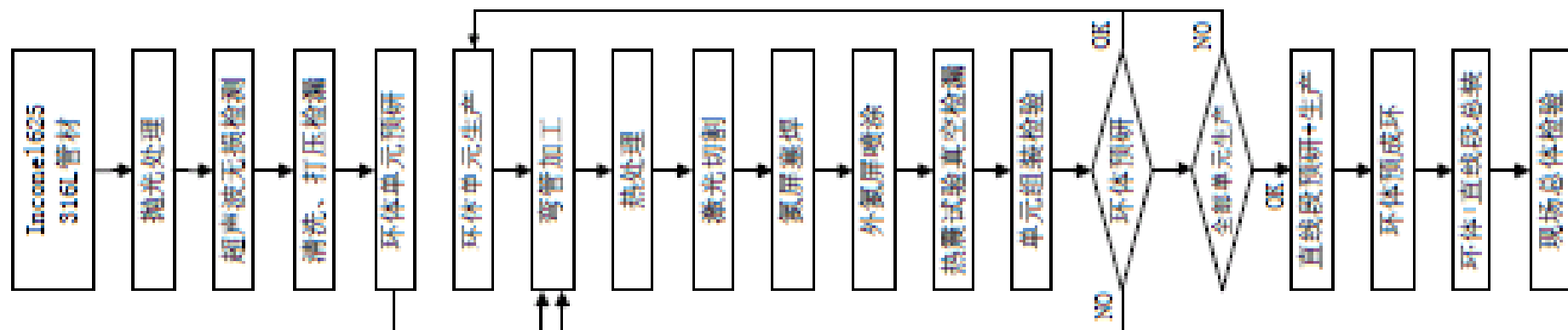
Divertor cryopump for EAST

Guang-Nan Luo

Location and structure



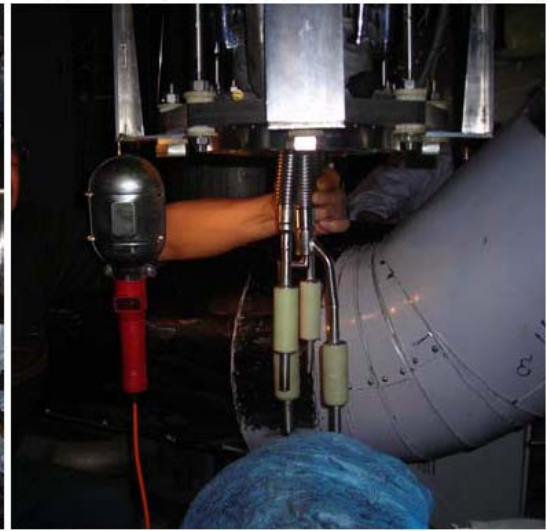
Manufacturing and materials



- SS (无缝, 316L) – $\Phi 96 \times 3$ – 热屏蔽/支撑 (环体+直线段用)
- Inconel 625 (焊管) – $\Phi 80 \times 1.65$ – 外氦屏 (环体用)
- $\Phi 50.8 \times 0.9$ – 内氦屏 (环体用)
- Inconel 625 (无缝) – $\Phi 25.4 \times 0.9$ – 外氦管 (环体用)
- $\Phi 19.27 \times 0.9$ – 内氦管(环体扰流管+直线输液管)
- $\Phi 12.7 \times 0.9$ – 内/外氦管 (环体+直线段用)

注：弯管+热处理、激光切割、喷涂试验用管为 304SS。





Achievements

- R = 2120 mm
- Manufacturing leakage:
 $<1 \times 10^{-9} \text{Pa} \cdot \text{m}^3/\text{s}$ (1MPa)
- Pumping speed, :
26000 L/s@ 1×10^{-5} Pa
75636 L/s@ 5.5×10^{-3} Pa(D₂)
- 2008-2010, 4 experimental campaigns, long time baking at 150-200 °C, many disruptions, no leak detectable, only survival of the major in-vessel components installed in 2008