CRYOFLEX Transfer Lines - History

- 1st Superconducting Cable 1970
  - Niobium SC
  - 3 flows of cold liquid and gas
  - 3 vacuum enclosures
- 1980 1st vacuum insulated transfer line delivered to CERN
- 1983 More than 1000 m transfer lines delivered to the industry
- 1989 1200 m transfer lines installed for Ariane 5 rocket
- 2000 More than 20.000 m standard transfer lines delivered to the industry and institutes
- 2008 More than 100 km transfer lines delivered

➡ **Experience in design and production for more than 30 years**

CRYOFLEX

- Nexans is a world leader in the support of flexible transfer lines for cryogenic liquids
- Supply of standard products as well as products for special applications
- Cryogenic system design including cryogenic couplings, vacuum insulated valve clusters, phase separators etc.
- Long term vacuum: Pipe systems in continuous operation without maintenance for more than 10 years

1. Corrugated inner pipe
2. Spacer
3. Super insulation
4. Vacuum space
5. Corrugated outer pipe
6. Jacket

4-Tube Coaxial Transfer Line
for liquefied gases

- flexible
- vacuum insulated
- extremely low heat inleak
- 2 flow channels

6-Tube Coaxial Transfer Line

for LHe, GHe and LN2

- flexible
- vacuum insulated
- extremely low heat inleak
- 3 flow channels

Special Projects

CRYO-Jumper prototype for the ITER fusion reactor