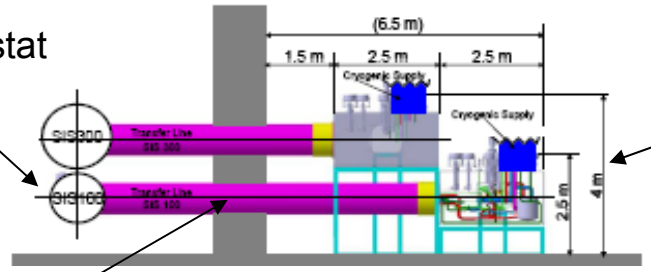
EoI on
2.8.12 Cryogenics (local)
for SIS100

Jaroslaw Fydrych,
Maciej Chorowski
Wrocław University of Technology (WUT)
Poland

Description of the EoI

- 3 Cryogenic Feedboxs for the ring magnets	**(2.8.12.1)**	**WUT**
- 2 Feedbox for the reference magnets	**(2.8.12.2)**	**WUT**
- Current Lead Boxes	(2.8.12.10)	
- 6 Endboxes + 1 Endbox for referance magnet	**(2.8.12.3)**	**WUT**
- Cryogenic bypass lines	**(2.8.12.5)**	**WUT**
- Cold Link,	(2.8.12.9)	
- 3 Feed in cryostat	**(2.8.12.12)**	**WUT**
- Connecting Cryostat	(2.8.12.6)	
- Measurement Techniques	(2.8.12.7)	

Feed in cryostat



Cryogenic Feedbox
for the ring magnets

Cryogenic feed line (2.8.12.11) ?

Description of the EoI

• **2.8.12.1 Cryogenic Feedbox, Ring Magnets**	**3**	**153.0**	**459**	**WUT**
• **2.8.12.2 Feedbox ref. magnets**	**2**	**114.4**	**229**	**WUT**
• **2.8.12.3 Endboxes (including Reference Magnets?)**	**7**	**46.7**	**327**	**WUT**
• **2.8.12.4 Cryostat End Caps (incl. CWT?)**	**54**	**22.1**	**1192**	**WUT**
• **2.8.12.5 Cryogenic bypass line (including Bus Bars 2.8.2.6?)**	**315**	**4.9**	**1542**	**WUT**
• 2.8.12.6 Connecting Cryostat	165	6.9	1139	
• 2.8.12.7 Safety valves	12	5.6	67	
• 2.8.12.8 Measurement Techniques	1	433.4	433	
• 2.8.12.9 Superconducting Cold Links				
• *2.8.12.9.1 Superconducting Cold Link, Building 1 (13 kA)[m]*	420	1.1	458	
• *2.8.12.9.2 Superconducting Cold Link, Building 2 (13 kA)[m]*	120	1.9	223	
• *2.8.12.9.3 Superconducting Cold Link, Building 3 (13 kA)[m]*	120	1.9	223	
• 2.8.12.10 Current Lead boxes without Current Leads (48 current leads)	48	4.3	208	
• **2.8.12.11 3 x Cryogenic / Current Feed Line**	**30**	**9.5**	**285**	**WUT**
• **2.8.12.12 Feed in cryostats**				
• ***2.8.12.12.1 Feed in cryostat (Standard Version)***	**2**	**120.4**	**241**	**WUT**
• ***2.8.12.12.2 Feed in cryostat (Exeptional Version)***	**1**	**64.2**	**64**	**WUT**
• 2.8.12.13 Special Magnet Cryostats				
• *2.8.12.13.1 Injection cryostat (for 4 Quadrupoles)*	1	321.1	321	
• *2.8.12.13.2 Transfer Cryostat (for 4 Quadrupoles)*	1	401.3	401	
• *2.8.12.13.3 Extraction Cryostat (for 4 Quadrupoles, 1 Dipole)*	1	321.1	321	

Items to Discuss

- We need the technical specification of the components including:
  - flow schemes,
  - helium mass flow rates,
  - acceptable heat in-leaks to the chosen elements,
  - space designed for the components,
  - design of the subcomponents to be delivered by other parties:
    - bus bar design,
  - the most important interfaces:
    - interfaces between feed in cryostats and ring magnets,
    - interfaces of the feedboxes for the reference magnets,

    (Interfaces of the cryogenic bypass lines should be specified by WUT)