

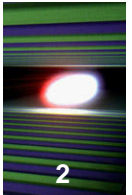


XFEL Tunnel Ventilation and Air Conditioning

J.-P. Jensen, DESY, Hamburg

October 25.&26, 2010

XFEL TVAC Workshop

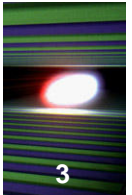


- Welcome to the TVAC workshop on

XFEL tunnel ventilation and air conditioning

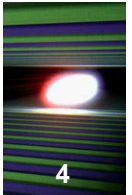
- Guest and participants from
 - SLAC: Jim Welch
 - CERN: Mauro Nonis, Yannic Body
 - CELLS: Lluís Miralles
 - BESSY: Bernward Nonn, Henrico Lenz
 - DESY: Sylke Feucker, Hans-Jörg Eckoldt, Thomas Hott, Jens-Peter Jensen, Olaf Krebs, Michael Koepke, Frank-Reinhard Ullrich
 - XFEL: Carola Schulz, Tobias Haas, Joachim Pflüger

Motivation of the workshop



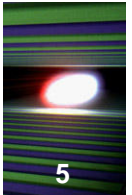
- What is the motivation of the workshop?
- XFEL undulator and photon beam tunnels
 - Extreme long undulator strings of 50 insertion units
 - Tunnel length between 260 m to 660 m
 - Undulators are installed in underground tunnels
 - Access only from the shafts
 - Temperature gradient only 0.1 °C per undulator unit, 6.1 m
 - Inhomogeneous soil around the tunnel
 - Installation period, commissioning, steady state operation, service day or week, shut down

Mission of workshop



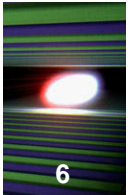
- What is the best design?
 - As cost-effective as possible or
 - As good as possible
- Would the design meet the requirements?
- What are the cost drivers?
- What are the experiences at other labs?
- What must be improved?
- Etc.

TVAC Workshop



- We have two days of presentations and discussions
- Air conditioning becomes more and more important for synchrotron light sources
- An intensive exchange between the labs will be helpful

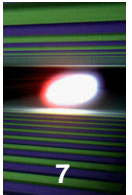
Monday, October 25, 2010



Morning session: XFEL Tunnel Ventilation

- 09:00 Welcome 15'
Speaker: Jens-Peter Jensen
- 09:15 Overview of technical infrastructure XFEL 45'
Speaker: Jens-Peter Jensen
- 10:00 Ventilation and Air Conditioning concept XFEL 45'
Speaker: Sylke Feuker
- 10:45 Coffee break 15'
- 11:00 Temperature Calculation 20'
Speaker: Narcisse Ngada
- 11:20 Air treatment operation costs 20'
Speaker: Sylke Feuker, Stefan Koch
- 11:45 - 14:00 **Lunch (DESY canteen)**

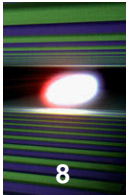
Monday, October 25, 2010



Afternoon session: Safety, SASE Air Conditioning, Guest Talks

- 14:00 Tunnel safety concept 45'
Speaker: Andreas Hoppe (DESY)
- 14:30 Air Conditioning SASE tunnel 30'
Speaker: Carola Schulz (XFEL)
- 15:15 Coffeebreak 15'
- 15:30 LCLS ventilation concept 30'
Speaker: Jim Welch (SLAC)
- 16:00 CERN ventilation concept 30'
Speakers: Mauro Nonis (CERN), Yannic Body (CERN)
- 16:30 BESSY ventilation concept 30'
Speakers: Bernward Nonn, Henrico Lentz (BESSY)
- 17:00 CELLS ventilation concept 30'
Speaker: Lluís Miralles (ALBA/CELLS)
- 17:30 - 19:00 Discussion 1h30'
- 19:00 - 00:00 Restaurant "La Vela"

Tuesday 26 October 2010



Morning: Tour

- 09:00 XFEL - XTL- Mock-up 45'
- 09:45 XFEL - AMTF hall 45'
- 10:30 FLASH Experimental hall 45'
- 11:15 PETRA Experimental hall 45'

12:00 -14:00 Lunch (DESY canteen)

Afternoon: Summary and recommendations

- 14:00 Working group 3h00'
- 17:00 Summary 1h00'

- If you need any help, please contact Mrs. Keidel
- Restaurant visit “La Vela”
 - Please register until end of coffee break

