MCE

WIND TUNNEL EPFL

HABAU GROUP

RENOVATION OF EPFL WIRE WIND TUNNEL

With more than 300 laboratories and research groups on campus, EPFL is one of the Europe‘s most innovative and productive technology institutes. At EPFL the emphasize is on both theoretical and applied research.

The main goal of the WIRE (Wind Engineering and Renewable Energy Laboratory) research is to improve our understanding and ability to predict turbulent transport of momentum and scalars (e.g., heat, water vapor, pollutants) in environmental flows, with emphasis on the atmospheric boundary layer and wind energy systems. Improved descriptions of those processes are developed and used in engineering, environmental and wind energy applications (e.g., weather, air quality and wind resource assessment models). The research of WIRE involves a synergistic combination of experimental (field and wind tunnel) work, numerical modeling (large-eddy simulation) and theoretical development. (Source: www.epfl.ch)

For advanced requirements in research applications EPFL WIRE refurbishes their existing open-loop wind tunnel.

Scope of MCE:

- Building of a closed-loop wind tunnel (46.9 m x 10.8 m L x W)
- Moving and lifting of the current test section (length of test section is 28 m)
- Wind speed requirements are from very good controllable low speeds up to 25 m/s
- Breather/Purge System
- Temperature range from –10°C to 120°C
- Contraction inlet area = 22.56 m²
- Contraction outlet area = 4.5 m²
- Fan power = 110 kW

Facts & Figures:			
Wind tunnel:	46.9 x 10.8 m	Customer:	École polytechnique fédérale de Lausanne (EPFL) Switzerland
Contraction inlet area:	22.56 m^2		
Contraction outlet area:	4.5 m^2	Project period:	2012 - 2013
Wind speed:	from 0 to 25 m/s	Temperature range:	from - 5° C to 120° C

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