2nd Swedish conference

on design and fabrication of welded structures

9-10 October 2013, Borlänge

2nd Swedish conference on design and fabrication of welded structures

It serves as a dissemination for:
WIQ, that is a 3 year (2009-2012) project partly funded by the FFI Program and lead by Volvo

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Further background on the project

The participants in this project and other organizations have since the mid 1980´s carried out a series of national and international R&D projects with emphasis on design and fabrication of welded structures. These previous projects have addressed several topics throughout the years, such as: Introduction of HSS, development of analysis methods, environmental aspects, durability, LCC analysis, high performance welding processes, weld quality, post treatments and weight reduction etc.

This project has studied the implementation of a newly developed weld quality system in design, analysis, fabrication and inspection. The aim of the current project is optimizing the performance of welded structures by innovative design and cost effective fabrication.

Achieved results:

- New welding procedures
- New improvement procedures
- New NDE/NDT-procedures
- Improved productivity of Volvo CE products
- Lighter structures
- Less fuel consumption

Program

Day 1 9 october

09.00–11.30	SSAB Borlänge steel mill tour
12.00-13.00	Lunch
13.00–13.10	Welcome and introduction, Bertil Jonsson, Zuheir Barsoum
13.10-13.30	Updates of newly implemented weld quality system within Volvo CE, Bertil Jonsson, Volvo CE
13.30-13.50	The development of fatigue Loaded welded steel structures, Jack Samuelsson, KTH
13.50-14.10	Fatigue design of lightweight welded vehicle structures: influence of material and production procedures, Zuheir Barsoum, KTH
14.10-14.30	Increasing fatigue life using Low Transformation Temperature (LTT) welding consumables, Leif Karlsson, University West
14.30-15.00	Coffee
15.00-15.20	Development of an IIW Guideline for Fatigue Strength Improvement of Steel Structures by High Frequency Mechanical Impact (HFMI), Gary Marquis, Aalto University, Finland
15.20–15.40	Study of the local notch stress HFMI master S/N-curve approach on high- strength steel joints, Michael Stoschka, Leoben University, Austria
15.40–16.00	Local stress assessments of HFMI-treated welded structures, Halid Yildirim, Aalto University, Finland
16.00–16.20	Quality assurance for welding – Standards and requirements, Mathias Lundin, Svetskommissionen
16.20-16.40	A Different View of Quality Assurance for Fatigue Loaded Structures, Anna Ericson Öberg, Chalmers/Volvo CE
16.40–17.00	Robustness of welding processes, Peter Hammersberg, Chalmers
17.00-17.30	General discussions
	End of day 1
19.00 -	Dinner

Day 2 10 october

08.30–08.50	Fast optical 3D scanning method using structured light for quality-control and reverse engineering, StefanRosén, Toponova
08.50-09.10	An algorithm for assessing weld surface geometry in welded joints, Thomas Holmstrand, KTH
09.10-09.30	Innovative welding procedures for efficient fabrication of fatigue loaded structures, Erik Åstrand,University West / Volvo CE
09.30-09.50	Simplifications in finite element simulat-ions for prediction of welding residual stresses, Ayjwat A Bhatti, KTH
09.50-10.20	Coffee
10.20-10.40	Ultimate strength and failure modes for butt welds in high strength steels, Mansoor Khurshid, KTH
10.40-11.00	Influence of oxides movement on cold lap formation, Peigang Li, University West
11.00-11.20	Design and weld for purpose shown in a demonstrator: A Boggi Beam, Bertil Jonsson, Volvo CE
11.20-11.40	Parametric weld-design evaluation in crane loader body, Jon Skagersten, Hiab Cargotec
11.40-12.00	Load analysis of field data for fatigue classification, Lars Rydahl, Hiab Cargotec
12.00-12.20	Influence of cut edge quality on fatigue strength of high strength steels, Joachim Larsson, SSAB
12.20-12.30	General discussions and closing of conference
12.30-14.00	Lunch

The program can change without notice.

More info on website www.svets.se/fou/wiq

Registration

www.svets.se/fou/wiq click registration and fill in your data.

We are expecting your registration before the 10th of September. Or call Eva Bergstrand or Peter Norman at Svetskommissionen, 08-120 304 00 to get help.

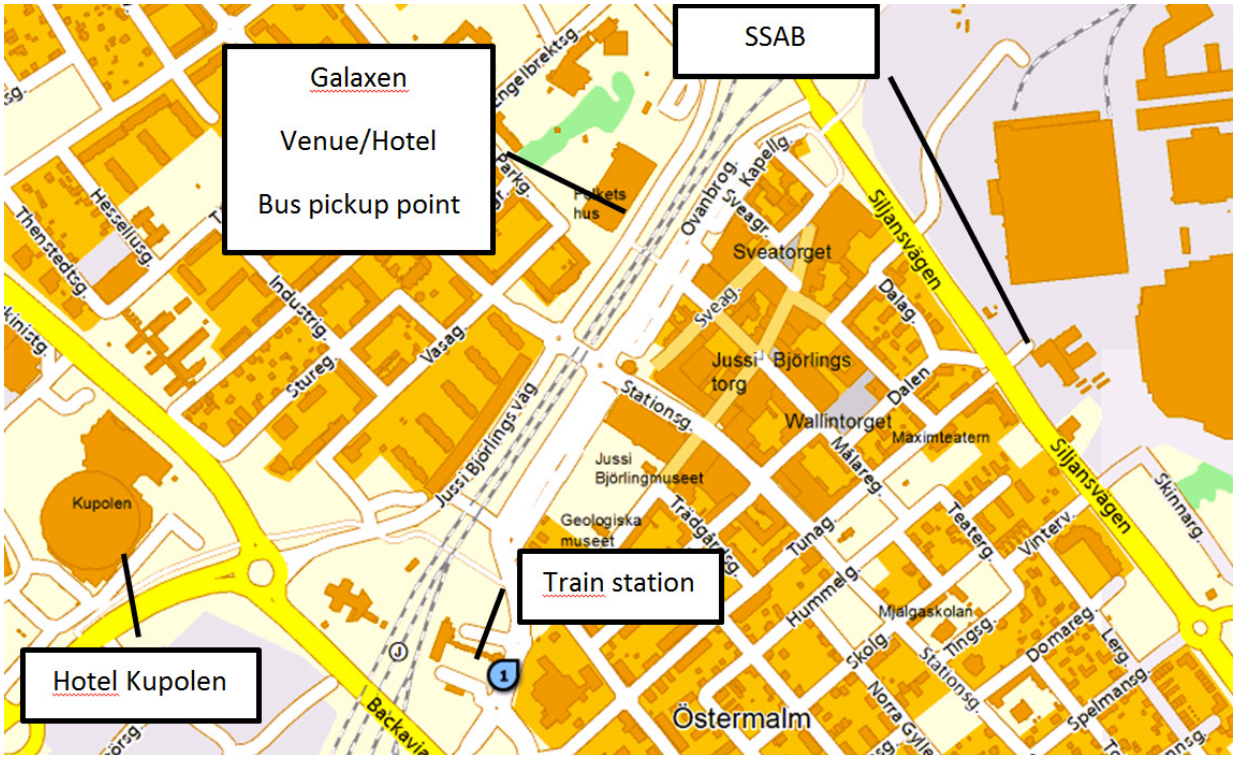
Costs

Participant in WIQ project or PhD-student:	2000SEK
Other participants:	3500SEK

Hotel

Quality Hotel Galaxen Jussi Björlings Väg 25 0243-216000	Venue site Until the 10:th of September pre-booked 850SEK incl breakfast
Hotel Kupolen Kupolen 111 0243-68050	<1km from venue No pre booking 870SEK incl breakfast

Please use 38271 as booking reference if you are using any of these two hotels.



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