

THE NORDIC WELDING CONFERENCE BRINGS INTERNATIONAL WELDING EXPERTS TO TAMPERE



The Nordic Welding Conference has for long been recognised as a premier event for Nordic and international welding professionals. The first edition of the Conference, entitled "Nordiska Svetsmötet," was held in Stockholm, Sweden, and since 1948, the event has been organised by turns every two to three years in one of the Nordic countries: Sweden, Norway, Denmark, Finland and Iceland. The Conference highlights

topics of major relevance to the industry, addressed by a line-up of renowned international keynote speakers, while also providing an all-important forum for networking and the sharing of best practices. The Conference is an IIW associated event, hosted by The Welding Society of Finland (Suomen Hitsaustekniik-
nen Yhdistys), a longstanding member of The International Institute of Welding (IIW).



Welcome to Nordic Welding Conference

Jouko Lassila
Executive Director
The Welding Society of Finland
IIW Director

WEDNESDAY 5.11.

PLENARY SESSIONS 12.00 – 16.15

Formal Opening of the Conference
Jouko Lassila, Executive Director of The Welding Society of Finland

Welding in the Future - What do we need and what do we have to do to be competitive in the Future?
Prof. Gary B. Marquis, IIW President 2014-2017

Overview of industrial welding in Nordic countries:
• Denmark, Steen Ussing
• Norway, Dag Syvertsen
• Sweden, Lars Johansson
• Finland, Ismo Meuronen



COFFEE BREAK

Welding work in Poland - Relocation of production
Ilkka Nikkilä, Mesera Oy

14.40 – 16.00

For the Future!

Modern production automation for welding industry
Jari Tervola, Pemamek Oy Ltd

Process simulation and remote programming
Heikki Aalto, Delfoi, Finland

System for quality control of welding
ArcQ, NN. Kemppi Oy

Welding of the copper canister for nuclear waste by FSW - current development work and future implementation
Tero Purhonen, Posiva Oy

Summary and overview of the next conference



GALA DINNER, RESTAURANT NÄSINNEULA 20.00–23.00

THURSDAY 6.11.

9.30 – 12.30 HIGH STRENGTH STEELS AND APPLICATIONS *Chair: Kari Mäntyjärvi, University of Oulu*

High strength steels – research and applications in Finland
Kari Mäntyjärvi, University of Oulu

Ultra-high-strength hot-rolled steels
Jukka Kömi, Rautaruukki Corporation

Material technology – Stainless steels
Hannu-Pekka Heikkinen, Outokumpu Tornio Works



COFFEE BREAK

Usability of UHS steels using heat treatments
Antti Järvenpää, University of Oulu

Next generation ultra-high-strength harvester cranes
Risto Heikkilä, Logmer Forest Oy

High strength steel welding research results
Sami Heikkilä, University of Oulu



LUNCH

13.30 – 16.30 LASER WELDING *Chair: Antti Salminen, Lappeenranta University of Technology*

Potential of laser welding in large component production
Antti Salminen, Lappeenranta University of Technology

Design and manufacturing aspects when laser welding ultra-high-strength steel-intensive car bodies
Jonny K. Larsson, VOLVO Ab, Sweden

Autogenous laser welding of butt joint - effect of the preparation
Mikko Vänskä, Lappeenranta University of Technology



COFFEE BREAK

Case : Laser welding application
Erkki Virkki, Machine Technology Center Turku Ltd

Formation and avoidance of undercuts in laser-arc hybrid welding
Alexander Kaplan, Luleå University of Technology

Laser cladding with scanning optics
Joonas Pekkarinen, Lappeenranta University of Technology

9.30 – 12.30 ROBOT WELDING AND AUTOMATION – PRODUCTIVITY *Chair: Jyrki Latokartano, Tampere University of Technology (The Robotic Society in Finland)*

Robot welding in Finland – from past to present
Jyrki Latokartano, The Robotic Society in Finland

Multi-robot welding in small batch production
Tero Haapakoski, HT Laser Oy

WeldControl solutions in automated welding
Matti Lahtinen, Pemamek Oy Ltd



COFFEE BREAK

Aluminium laser welding in battery production
Jyri Kylä-Kaila, Valmet Automotive Oy, Finland

Mobiweld - Mobile friction stir welding (FSW) system for aluminium structures
Tapio Heikkilä, VTT, Finland

Automation and productivity in robot welding
Anna-Niina Räsänen, John Deere Forestry Oy



LUNCH

13.30 – 16.30 DESIGN OF WELDED STRUCTURES *Chair: Pedro Vilaça, Aalto University*

Friction stir welding – new possibilities for designers
Pedro Vilaça, Aalto University

Design for laser welding
N.N. Trumpf, Germany

Fatigue behaviour of welded structures
N.N.



COFFEE BREAK

Square root classification of welds:
-Effective and illustrative sizing of welds
Heikki Holopainen, Foster Wheeler Energia Oy

COCKTAIL RECEPTION, TAMPERE CITY HALL 18.30 – 20.00