

## PROGRAM TUESDAY 1 JUNE 2021

9:45	Welcome by John Butterfield, Editor of Heat Exchanger World magazine
10:00	<p><b>10:00 – 11:15</b>  <b>Workshop: Heat Exchangers connecting Industry Together</b>  Workshop leaders: <i>Bharinder Ghai, Sandvik Materials Technology; Shell Pernis Representatives; Bronswerk Heat Transfer Representatives.</i></p> <p>Heat exchangers are an integral and everyday part of a multitude of our process industries from chemical and petro-chemical plants, refineries, natural gas processing, space heating, refrigeration, air conditioning, power stations, and sewage treatment. As with all industrial products they are continually under development as end-user needs evolve. This workshop will provide a discussion of some of the present day issues and offer some solutions and food for thought.</p> <p>A panel of experts from across the heat exchanger supply chain will address such topics as:</p> <ul style="list-style-type: none"> <li>- A brief overview and applications</li> <li>- What are some of the major challenges within the heat exchanger supply chain at present?</li> <li>- What are the challenges with using heat exchangers? Technical, commercial availability, skills, availability of product forms, fabrication/tube-to-tubesheet, lifecycle costs, materials selection, operating conditions, quality control</li> <li>- In the high-end industries is there a need to shift from low carbon steels to duplex/high-nickel alloys?</li> </ul>
11:15	Coffee and networking on the exhibition floor
11:45	<p><b>11:45 – 12:50</b>  <b>Session on the Cleaning of Heat Exchangers</b></p> <p>11:50 - Advantages of automation in heat exchanger cleaning. <i>Joost Bailleux, Peinemann Equipment</i>  12:10 - Low pressure methods to clean heat exchangers – something unique. <i>David Bokov, Goodway Benelux</i>  12:30 - Thermal cleaning of heat exchangers: no alternative but a better way to clean. <i>Robert Mol, Thermo-Clean Group</i></p>
12:50	Lunch break 12:50 – 14:00
14:00	<p><b>14:00 – 14:20</b>  <b>Repair/maintenance</b></p> <ul style="list-style-type: none"> <li>- Heat Exchanger tube plugging in compliance with ASME PCC-2 article 312. <i>Ben Cock, EST Curtiss Wright</i></li> </ul>
14:30	<p><b>14:30 – 16:00</b>  <b>THIS SESSION WILL BE HELD IN JOINT COLLABORATION WITH THE DUPLEX WORLD SEMINAR DELEGATES</b>  <b>Interactive workshop: The limits of duplex stainless steels</b>  Moderator: <i>Mark van den Broek, Fluor</i></p> <p>This session will discuss the the position of duplex stainless steels in the petrochemical industry. Serious incidents reported in the past decade relating to the incorrect use of the material have resulted in operators avoiding it. The session will look at restoring duplex's reputation. Duplexes can be a reliable and economical choice in many process applications when correctly used within their boundary limits. The session will end with new research results about lean duplex 1.4062.</p> <p>Presentations:</p> <ul style="list-style-type: none"> <li>- Specific material degradation mechanisms in petrochemical facilities relating to the use of duplexes. Examples of applications with issues (REACs, reboilers, vacuum condensers, etc.), and reliable and economically successful applications of duplexes in the petrochemical industry. <i>Mark van den Broek, Fluor</i></li> <li>- For heat exchangers in hydrogen and wet sour service, the problem area is the tube-to-tube-sheet weld. A best practice approach in designing and welding of tube-to-tube-sheet connections will be provided. <i>Jan-Willem Rensman, Fluor, coauthor John Houben, ExxonMobil,</i></li> <li>- Alternative solutions for REACS. <i>Jonas Howing, Sandvik</i></li> <li>- Lean duplex stainless steel 1.4062 research to its erosion– corrosion and ballistic propertied behavior. <i>Jamila Adem, Ugitech</i></li> </ul>
16:00	Coffee break
16:30	<p><b>16:30 – 17:55</b>  <b>Session on materials</b></p> <p>16:35 - Why choose plastics in preference to stainless steels. Plastic heat exchangers – solution for chemical corrosion and stick. <i>Erwin Volkens, Polyfluor Plastics</i>  16:55 - Plate heat exchangers and the growing demand for nickel high alloys and titanium. <i>Jorgen Smith, Harald Pihl</i>  17:15 - FDX 27: a duplex stainless steel plate for heat exchangers. <i>Rodrigo Signorelli, Outokumpu</i></p>

## PROGRAM WEDNESDAY 2 JUNE 2021

9:30	<p><b>9:30 – 11:00</b>  <b>Interactive workshop: Welding</b>  Moderator: <i>Raymond Cordewener, RCMC</i></p> <p>This session will start with a couple of short welding related presentations.  The presenters will be <i>Loïc Amadu (Groupe Ortec), Rob Spelt (SEC), Harry Schrijen (Schrijen Consultancy), Kees Meurs (Polysoude) and Raymond Cordewener (RCMC)</i>. The subjects will include the welding of duplex stainless steels and new welding-developments.</p> <p>The session will continue as a workshop.  Everybody is invited to bring questions with him/her and pose the questions to the panel. The presenters will try to answer your questions and/or give you directions.</p>
11:00	Coffee and networking on the exhibition floor
11:30	<p><b>11:30 – 12:35</b>  <b>Design session</b></p> <p>11:35 - A new cold-end heat exchanger for fired heaters for an exhaust temperature reduction below acid dew point. <i>Euro-Apex</i>  11:55 - Solid heat exchanger for flowable bulk goods. <i>Dr. Winfried Dallmann, Heinz Gothe GmbH &amp; Co. Ltd.</i>  12:15 - Polymer-based heat transfer solutions for flue gas treatment and utilization in corrosive environments. <i>Marcus Swetlik, Technoform</i></p>
12:35	Lunch break and networking
14:00	<p><b>14:00 – 14:20</b>  <b>Protection against corrosion</b></p> <p>Heat-cured phenol coating for corrosion protection. <i>Daniel Eras, CP Phenolics</i></p>
14:30	<p><b>14:30 – 15:30</b>  <b>Workshop: Selection of shell &amp; tube heat exchanger design by catalogue – the next frontier?</b>  Moderator: <i>Len Zoetemeijer, Consultant</i></p> <p>Over the years the software associated with thermal design of shell &amp; tube heat exchangers has matured and become more user-friendly.</p> <p>At the same time the global experience of the heat transfer engineering community continues to diminish, the requirements and the number of standards increasing while industry continues to design and manufacture tailor-made shell &amp; tube heat exchangers for each and every application, thereby using 'variations-on-a-theme' types of baffle and tube geometries.</p> <p>In many cases end-users have also developed their own standards using amendments and supplements to TEMA/API standards based on their own experience of working on projects and during operations.</p> <p>Because of the increasing number of specifications and requirements for the design and manufacture equipment, the International Association of Oil &amp; Gas Producers initiated the Joint Industry Program 33 (JIP33) to develop standardized industry procurement specifications in response to an industry-wide overrun on project costs of more than 40% in the upstream business in 2016. As such JIP 33 developed three additional standards supplementing/overlying API standard 660 for shell &amp; tube heat exchangers focusing on specification, quality, and information requirements.</p> <p>Time will tell if this new industry initiative will change the future with respect to cost effective shell &amp; tube heat exchanger designs and timely manufacture or whether end-users will continue to develop and maintain their own standards amending and supplementing standards like API 660. As industry already applies standardized equipment selected from a vendor's catalogue, like plate and frame heat exchangers, what would stop Industry from going a similar route for shell and tube heat exchangers through design standardization and replication?</p> <p>A panel of experts from all sections of the supply chain will discuss this new frontier before throwing open the topic to the audience to raise their thoughts and comments on the idea.</p>

Five months out from the event, it is still possible that there will be some additions made to the conference program before it takes place in June 2021.