



**TMS 2016 Industrial
Aluminum Electrolysis Course**
The Definitive Course on Theory and Practice
of Primary Aluminum Production

September 19 - 23, 2016 • Nanshan Aluminum Company
Longkou City, Shandong Province, China
Preliminary Course Agenda
As of June 8, 2016

Monday September 19, 2016		
<i>Time</i>	<i>Title of Presentation</i>	<i>Presenter</i>
07:30 - 08:00	Registration	
08:00 - 08:15	Welcome and Opening of the Course	Halvor Kvande
08:15 - 09:00	Introduction to the Aluminum Electrolysis Process	Halvor Kvande
09:00 - 10:00	Safety First! Electrical Safety in Potrooms	Vinko Potocnik
10:00 - 10:15	Break	
10:15 - 11:30	Basic Laws for Electrowinning	Barry Welch
11:30 - 12:30	Current Efficiency	Alton Tabereaux
12:30 - 13:30	Lunch	
13:30 - 14:30	Heat Balance Fundamentals	Halvor Kvande
14:30 - 14:45	Break	
14:45 - 15:45	Heat Balance Fundamentals (continued)	Halvor Kvande
15:45 - 16:30	Group Work on Heat Balance	Halvor Kvande
17:00	Welcome Reception	

Tuesday September 20, 2016		
<i>Time</i>	<i>Title of Presentation</i>	<i>Presenter</i>
08:00 - 09:00	Impact of Alumina Properties on Pot Operations	Steve Lindsay
09:00 - 10:00	Crust and Alumina Powder Dissolution and Cell Feeding	Barry Welch
10:00 - 10:15	Break	
10:15 - 11:15	Cell Voltage and Alumina Feeding Control	Vinko Potocnik
11:15 - 12:00	Electrolyte Compositions	Halvor Kvande
12:00 - 13:00	Lunch	
13:00 - 13:30	Industrial Application of Complex Bath Compositions	Zhaowen Wang
13:30 - 14:30	Measurement Techniques for Pot Analysis	Vinko Potocnik
14:30 - 14:45	Break	
14:45 - 16:00	Cell Operational Diagnostics	Alton Tabereaux
16:00 - 16:30	Group Work on Problem Pots	Alton Tabereaux

Wednesday September 21, 2016		
<i>Time</i>	<i>Title of Presentation</i>	<i>Presenter</i>
08:00 - 09:00	Cell Mass Balance and Reactions - Part 1: Temperature	Barry Welch
09:00 - 10:00	Cell Mass Balance and Reactions - Part 2: Cathode	Barry Welch
10:00 - 10:15	Break	
10:15 - 11:15	Measures to Control Metal Purity in Prebake Reduction Cells	Stephen Lindsay
11:15 - 12:00	Energy Consumption	Halvor Kvande
12:00 - 13:00	Lunch	
13:00 - 16:30	Plant Tour – Nanshan Aluminum Company	

Thursday September 22, 2016		
<i>Time</i>	<i>Title of Presentation</i>	<i>Presenter</i>
08:00 - 08:30	Anodes in the Cell - Part 1	Barry Welch
08:30 - 10:00	Anodes in the Cell - Part 2	Barry Welch
10:00 - 10:15	Break	
10:15 - 12:00	Busbars and MHD of High Amperage Cells	Vinko Potocnik
12:00 - 13:00	Lunch	
13:00 - 14:00	Anode Cover	Steve Lindsay
14:00 - 15:00	Evolution of perfluorocarbons (PFCs) in Cells - Discussion	Alton Tabereaux and Barry Welch
15:00 - 15:45	Fluoride Emissions - Source, Generation Capture and Minimization	Barry Welch
15:45 - 16:30	Fluoride Emissions Control	Steve Lindsay
18:00	Graduation Dinner	

Friday September 23, 2016		
<i>Time</i>	<i>Title of Presentation</i>	<i>Presenter</i>
08:00 - 08:45	Cell Shutdown and Restart	Alton Tabereaux
08:45 - 10:00	Pot Complement Counter-Measures (Prolonging Pot Life)	Steve Lindsay
10:00 - 10:15	Break	
10:15 - 12:00	Cathode Technology - Part 1	Barry Welch
12:00 - 13:00	Lunch	
13:00 - 14:00	Cathode Technology - Part 2	Barry Welch
14:00 - 14:30	Shaped Cathodes	Naixiang Feng
14:30 - 14:45	Break	
14:45 - 16:00	Practical Cell Operational Problems – Questions from the Participants and Discussion and Sharing of Experiences	All
16:00 - 16:30	Summary and End of the Course	Halvor Kvande