CONTROL OF POTLINE SCRUBBER & FUGITIVE EMISSIONS for Aluminum Smelters Course

TMS ALUMINUM COURSE

May 21-24, 2018

Hilton Québec • Québec City, Québec, Canada

	Sunday, May 20
4:00 pm - 6:00 pm	**Registration**
	Monday, May 21
7:00 am - 5:00 pm	**Registration and Course Assistance**
8:00 am - 10:00 am	**1. Welcome & Introduction** (15min, MMH) **2. Overview of Emissions** (20min, MMH) **3. Emission Fundamentals** - A. Fluoride Generation & Scrubbing Basics (45min, MMH) & Particulates (15 min, DW). B. Group Discussion - Key Factors for F Generation (25min)
10:00 am - 10:15 am	***Break***
10:15 am - 12:00 pm	**3. Emission Fundamentals** C. Sulfur Emissions (45 min, SB) 4**. Dry Scrubber Design -** A. Cell Ventilation (30min, SB), B. Key Operating Areas (30min, DW).
12:00 pm - 1:00 pm	***Lunch***
1:00 pm - 2:30 pm	**5. Pot Ventilation & Scrubber Technologies** A. Dry Scrubbers Technology & Designs (60min, SL). B. Gas Flows (30min, SL)
2:30 pm - 2:40 pm	***Break***
2:40 pm - 3:40 pm	**5. Dry Scrubber Design, continued** C. Alumina Flows (30min, SL).
3:40 pm - 4:00 pm	***Break***
4:00 pm - 5:00 pm	***6. Group Discussions –*** *Attendees to share their own major control challenges.*
5:00 pm - 7:00 pm	**Welcome Reception**

	Tuesday, May 22
7:00 am - 12:00 pm	**Registration and Course Assistance**
8:00 am - 10:00 am	**7. Dry Scrubber Operation** A. Operational Considerations & Challenges, Control of Gas Flows (90min, SL) B. Control of Alumina Flows, Performance KPIs for Control (part 1) (30min, SL)
10:00 am - 10:15 am	***Break***
10:15 am - 11.45 am	**7. Dry Scrubber Operation -** (90min, SL) **B**. Control of Alumina Flows, Performance KPIs for Control (part 2)
12.00 pm	***Departure for Alcoa Deschambault Plant***
1:00 pm - 4.30 pm	**8. Plant tour at Alcoa Aluminerie de Deschambault** - Lunch - Safety induction and briefing - Plant tour
5:30 pm	**Return to Hotel**

	Wednesday, May 23
7:00 am - 5:00 pm	**Registration and Course Assistance**

8:00 am - 10:00 am	**9. Dry Scrubber Operation** (90min, MMH) A. Impact of Alumina Properties & Specifications vs. HF vs. Scrubbing B. Emission Monitors (30min, DW)
10:00 am - 10:15 am	***Break***
10:15 am - 12:00 pm	**10. SO_2 Wet Scrubbers (**75min, SB) A. Design Principles & Key Areas B. Operation & Control - designs, types, operational aspects 11. **Management of Potroom Fugitive Emissions** (90min, DW) - Fluorides, Particulates, PFCs, Impact of Operations, Emission Controls, Maintenance, Process Control, Audits
12:00 pm - 1:00 pm	***Lunch***
1:00 pm - 2:00 pm	11. **Management of Potroom Fugitive Emissions, continued** (60min, DW)
2:00 pm - 2:10 pm	***Break***
2:10 pm - 3:10 pm	**12. PFC Emissions** (60 min, DW)
3:10 pm - 3:20 pm	***Break***
3:20 pm - 4:50 pm	**13. Process Calculations for Environmental Engineering** (90min, SB)
4:50 pm - 5:30 pm	***14. Group Discussion -*** *What if Controls required for other Smelting Emissions?*

Thursday, May 24	
7:00 am - 5:00 pm	**Registration and Course Assistance**
8:00 am - 10:00 am	**15. Guidelines for Engineering, Procurement, & Construction of Scrubber Technologies** (60min, SB). **16. Advancements & Developments in Scrubber Emission Controls -** (60 min, SB) - Drivers, Pot Gas Cooling, Advanced Filter Bags, Compact GTCs, etc.
10:00 am - 10:15 am	***Break***
10:15 am - 12:00 pm	**17. Advancements in Potroom Emission Controls** (20min, DW) - Draft, Spent Anode Controls **18. Common Problems with Potroom Roof Emissions** (70 min, SL) *Attendee presentations preparation time*
12:00 pm - 1:00 pm	***Lunch***
1:00 pm - 2:30 pm	***19. Attendee Presentations*** *to Group - Emission Management Plans for Key Issues Faced*
2:30 pm - 2:40 pm	***Break***
2:40 pm - 4:00 pm	*Attendee Presentations, Continued.* ***20. Graduation Ceremony***
4:00 pm	***Course Concludes***

Instructor Leads

MMH- Prof. Margaret Hyland
SB- Mr. Stephan Broek
SL-Mr. Steve Lindsay
SW- Dr. David S. Wong