SIMSA | Saskatchewan Industrial & Mining Suppliers Association Inc

February 1, 2023

Executive Director's Message

2023 marks the 10th Anniversary of SIMSA, so on March 30th we will have an event to mark the occasion in Saskatoon at Prairieland Park. We will invite SIMSA members +1, and several guests.

The event will celebrate "Look what we've built together," as SIMSA's success was due to our members, Board and management; as well as several industry, Government, and Indigenous partners.

Simply put, there is a bright light shining on Saskatchewan with the world coming to us to build capacity elsewhere. We are now providing not just finished goods, but also services, expertise, best practices, and solutions to the world.

Draft agenda:

- 4:30 p.m. Reception
- 6:00 p.m. Dinner
- 7:00 p.m. Presentations and acknowledgements
- 7:30 p.m. Video presentation and close of program
- 8:00 p.m. Networking
- 9:00 p.m. Close

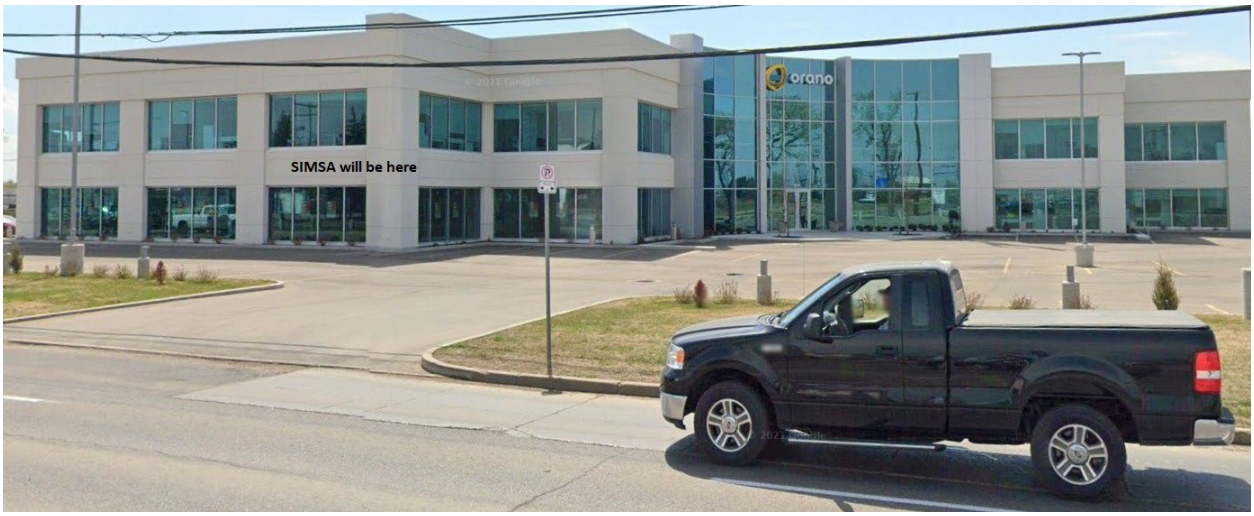
Ticket and other information to follow!

And, SIMSA is moving!

Almost since our inception, we've been graciously located within the JNE Welding building on 56th Street East in Saskatoon. The rent rate – which was basically only an honorarium – allowed us to gain economic stability while we grew. SIMSA is very grateful to JNE for their generosity.

This spring, we will move to the main floor of the new Orano Resources building at 833 - 45th Street West (by the new airport hotels) in Saskatoon. This facility will allow us to expand our staff so we can offer more services to members, host larger meetings within our offices, plus other benefits.

The Google image picture below reflects our location – we will be on the ground floor.



Members' News

[DSG Power System's Focus on Reducing Diesel Exhaust Emissions]

[EECOL Electric opens more locations in Saskatchewan]

[JA Tech – The Power Transformers Experts for the Mining Industry!]

[How the Saskatchewan Research Council is Using Metal Smelting for Rare Earths]

[New Safety Courses at Haztech for 2023]

[Prairie Machine builds unique solution to streamline the conveyor infrastructure development process without pausing production]

[Respec Has a Quarterly Newsletter]

Sector News

SIMSA and its members are becoming recognised as global leaders.

Over the past three months, we have witnessed several countries coming to Saskatchewan (specifically SIMSA), not for our resources, but for the supply chain (you) that helps identify it, pull it out of the ground, process it, ship it, and clean it up.

Our supply chain is seen as world leading, and countries are coming to us for help.

For example, SIMSA was recently approached to help foster partner development, between the experienced Saskatchewan mining supply chain, and those in the West African countries of Republic of Malia, Burkina Fasso, and Guinea. The goal is to provide improved products and services to the West African Mining industry. Included in this effort is a company that does not operate here - Barrick Gold. So, the event not only opens up a new geographical region to SIMSA members, it also opens up another major mining company. This is a multi-billion-dollar opportunity.

We also had a similar request from Kazakhstan, which is expanding. As you will recall, SIMSA hosted persons from the Kazakhstan Embassy last fall. This visit resulted in SIMSA participating in two events at PDAC.

At the same time as and aligned with PDAC, I will be MC'ing a portion of an event with several Eastern European and Canadian Ambassadors, Cameco, Rio Tinto, B2Gold, several Canadian trade commissioners, and others – see https://canadaeurasia.com/event-5027860 (each panel will have a person from the major mining companies added – their names are just not on the program yet). The panel I am hosting will discuss expanding business relationships between Saskatchewan and Kazakhstan.

More importantly to SIMSA members, we will be presenting/assembling a very focused event, which could eventually cause Saskatchewan persons, to build a potash sector in Kazakhstan. With Saskatchewan thought leading the development, our suppliers naturally will follow in. This is potentially a multi-billion-dollar opportunity.

The Canada Eurasia Chamber of Commerce (CECC) (both the Government of Kazakhstan and Cameco are heavily involved in this) and SIMSA, have developed this small event, that will see Saskatchewan suppliers involved in resource evaluations and junior potash miners, meet with Kazakh persons at PDAC, to discuss the development of Kazakh potash deposits. In advance of the event, the CECC is developing a basic set of questions to be answered by Kazakh persons, and then to distributed amongst the various suppliers and junior miners here (resource size, lease availability, geology, permitting, financing, etc.).

The goal is to connect Saskatchewan know-how with the Kazakh government, in order to assess the viability of and opportunities from developing their potash deposits. And then, our supply chain is in on the ground floor.

Carbon Reduction (a new segment)

Up to 50% of heat energy is wasted every year

There are many sources of waste heat, but this article will focus on two – air compressors and convection ovens.

Industrial-sized air compressors are one of the least efficient energy converters in a shop. Optimistically, 80% of the energy input into an air compressor is converted into waste heat. Most of these projects have ROIs in the range of less-than-1 year. Especially when one is able to use that heat for process use.

What can we do about it?

- Air compressor energy recovery is usually simple to implement;
- No risk to production;
- Water cooled compressors - the ROI is better if you have a heat sink near-by.

What ways can it be done?

- Water cooled – heat exchanger to either process heat (feedwater on a boiler) or HVAC system to offset heating load.
- Air cooled or water cooled – if air compressor is placed in a non-heated room or a separate non-ducted, consider ducting into the main facility to offset heating load in the winter. Can install a thermostat-controlled damper.

Convection ovens are another one of the larger wasters of energy. With only around 22% of the energy input going to product. Below are typical values of energy losses:

- Exhaust – 44%
- Material handling – 17%
- Shell loss – 16%
- Opening loss – 0.5%
- Stored loss – 0.5%

What can we do about it?

- Most ovens are over 20 years old, without VFDs (variable frequency drives);
- Most new chemicals no longer require the same amount of ventilation;

- Add a heat exchanger that works with your process (that will not corrode due to particulates within the exhaust).

An important consideration is finding a great heat sink, either through the oven you are using or a process nearby. For offsetting space heating load, you will only get about 40-60% of recovered heat back.

Further Reading:
https://www.energy.gov/eere/amo/articles/waste-heat-recovery-resource-page

Other Potential Areas for heat recovery for Change:

- Machine Cooling - Welding, mill, etc.;
- Pollution control - such as regenerative thermal oxidizers (RTOs);
- Roasters;
- High temperature furnaces – glass processing, steel processing, aluminum melting, heat treatment;
- Industrial Ovens – Paint curing, drying;
- Dryers – Air drying;
- Evaporators – with or without thermal compressor;
- Autoclaves.
- Distribution losses – lack of thermal insulation on piping, or high heat surfaces. Insulate even if you are using that waste heat for space heating. Especially if these surfaces and pipes are near the ceiling. They will really on heat the ceiling area and not efficiently offset your heating load.
- End-user losses – Not understanding how much energy is actually needed. Energy should only be required to increase the temperature and/or evaporate moisture.
- Make-up air units – consider air-to-air heat exchanger to preheat incoming air without outgoing air.
- Air redistribution – reduce hot spots by moving air throughout building.

Upcoming Events

Register for Upcoming Events HERE

- **Conflict Resolution with Negotiations Ninja Event – February 9, 2023**
  Learn how to deal with the conflicts that occur in the at work so you can work more productively, effectively, and profitably.

- **SIMSA's 10th Anniversary Celebration Event – March 30, 2023**
  Save the date! SIMSA will be celebrating our 10th anniversary with an evening social event at Prairieland Park in Saskatoon.

- **Saskatchewan Mining Supply Chain Forum (MSCF) – April 18 & 19, 2023**
  The MSCF continues to be the event to attend to find out how manufacturers, construction, equipment and service providers can access mining supply opportunities. As always, this event will take place at Prairieland Park in Saskatoon, SK.

- **SIMSA's 2023 AGM – May 16, 2023**
  Save the date! SIMSA's AGM will be on May 16, 2023 at Prairieland Park in Saskatoon, SK.

- **Saskatchewan Suppliers Energy Forum (SSEF) – October 4, 2023**
  Save the Date! The 9th Annual Saskatchewan Suppliers Energy Forum will be on October 4, 2023 at the Delta Hotel in Regina, SK.

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