**Kazzinc LLP Metallurgical Plant, Ust-Kamenogorsk**

**Comment**

Heat exchangers and gas flues at WSA Haldor Topsoe unit in Ust-Kamenogorsk Metallurgical Plant Kazzinc LLP before were insulated using traditional materials - Rockwool mineral plates. Thickness of the thermal insulation layer was 400 mm. Operating temperature reached + 450°C. Large size, many reinforcing ribs did not allow making good quality insulation. Due to "cold bridges" and leaks in the heat-insulating layer, steel structures were subject to corrosion, which led to depressurization and gas emission. This in turn led to unplanned shutdowns for costly repairs.

To solve this problem, we decided to use Isollat heat insulation materials.

Isollat-Effect combination made total thickness of 45–48 mm. Continuous monitoring of metal structures thickness during one year indicates that there is no corrosion, there is no gas emission, unscheduled stops for repairs to eliminate gas emissions are not needed any more.

As a result, we can mention the following advantages of Isollat materials:

- highly efficient thermal insulation for equipment with high temperatures - up to + 500C;
- insulation itself is light;
- insulation layer is monolithic, seamless that eliminates (or significantly reduces) cold bridges;
- good adhesion to the surfaces and durability.

Using Isollat heat insulation provided significant economic effect. Turnaround time at operating the unit has increased.