



GT Outlet / HRSG Inlet Cycling Joint Cold Casing



Internally insulated ducts (cold casings and cold to hot)

Cold casing duct systems are the modern approach to the need of power plants to be cycling more frequently.

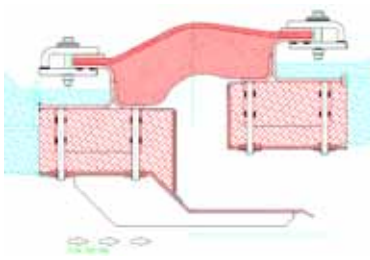
DEKOMTE has developed many solutions for cold duct systems, with the emphasis on integration into the duct design. The adjacent duct internal insulation, cladding and flow plate arrangement need careful attention to ensure no gaps of interface.

The insulation system is the most important point. There must be a seamless insulation between the duct and the expansion joint bolster.

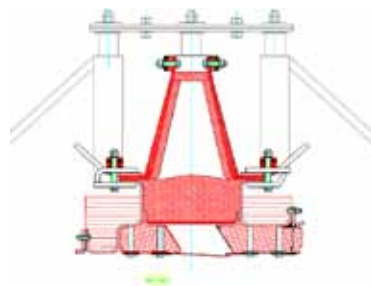
The steel frame upstand of the expansion joint must not be heated by the flue gas, after compression and degradation of insulation.

DEKOMTE has retrofit and OEM solutions which will meet the operational criteria required.

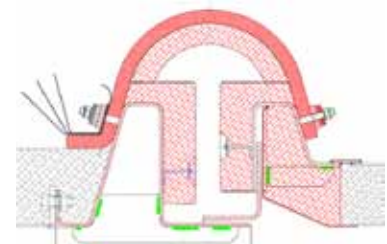
Different Design Issues



Base load solution - suitable for GT applications with cold casing exhaust system.



Flexing solution - suitable for changeover from hot to cold casing exhaust system with large duct movements.

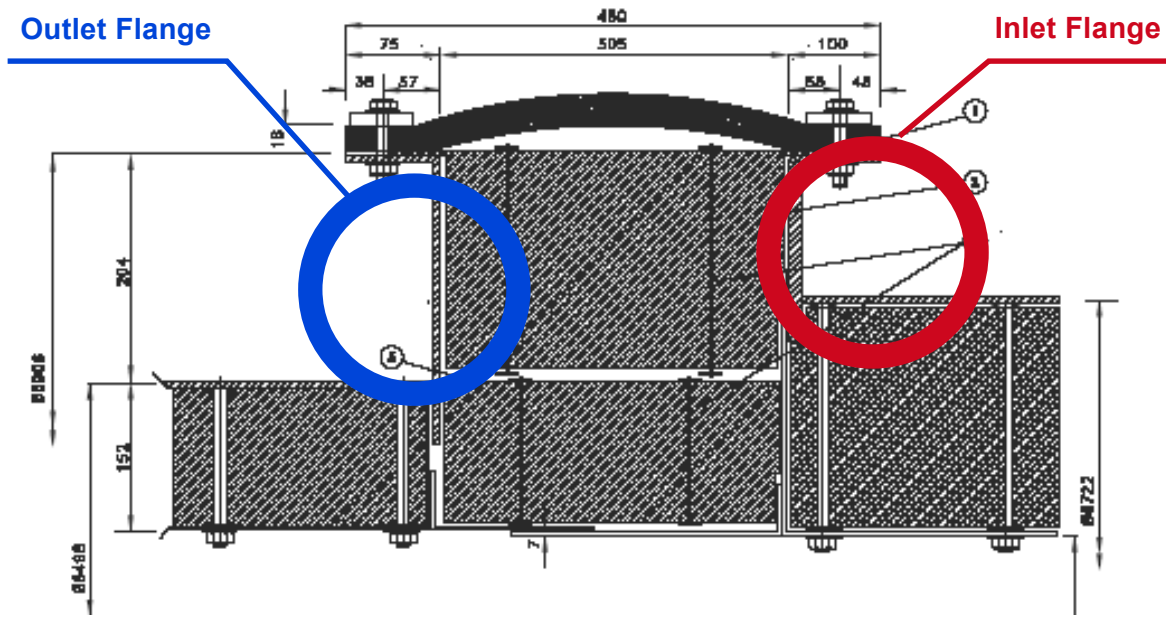


Cycling solution - suitable for changeover from hot to cold casing exhaust system with large duct movements and high cycling impact.

Design Issues:

- Lining interfaces
- Insulation integrity
- Gas paths

GT Outlet / HRSG Inlet Cycling Joint
Cold Casing



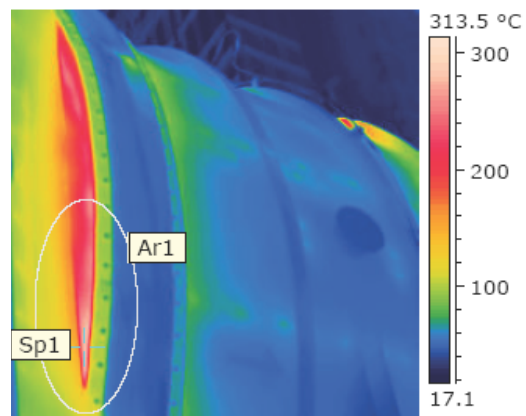
Short term solution

- Re-insulate missing pockets
- Plate gaps to duct flange
- Reconfigure bolsters
- Install flow plate
- Upgrade clamping system

Dimension inside:	Ø 6906 mm
Gas velocity / pressure static:	80 mbar
Movement:	axial: (Z) -70 mm (X) 30 mm lateral: (Y) 25 mm
Thermal transient:	Normal start of turbine

Long Term Solution

- Designed steel parts
- Improved duct interface
- New seamless internal insulation
- New fabric and bolster design



Thermographics for thermal analysis