## KHALSA® RECUPERATORS (waste heat recovery system)

**DESIGNING & MAINTAINING ONLY THE BEST** 



## "Upscaling energy efficient technology in steel rolling mill industry in India"

## **RECUPERATOR** (WASTE HEAT RECOVERY SYSTEM)

- Higher air preheats with existing furnaces
- Simple installation
- Furnace capacities from 2 tph to 40 tph
- Suitable for all fuels including pulverized coal, Furnace Oil, Gas etc.
- Faster furnace start-up
- Up to 25% fuel savings
- Increased furnace productivity
- Higher flame temperature
- Better soaking of the raw material
- Low investment
- Custom design solutions available
- Replacements as per existing design can be manufactured



In a reheating furnace, major heat losses were found to be in the flue gases leaving the furnaces at very high temperatures. Recuperators are waste heat recovery equipments that use the energy in hot waste flue gases to preheat combustion air. The main advantages of using Recuperator for preheating the air for combustion are as under:

- It is able to reduce the consumption of pulverized coal up to 25% as compared to coal air combustion
- The heat recovered from the flue gases by combustion air is returned to the furnace thus reducing pulverized coal requirement.
- The flame temperature is raised, resulting in increased radiative heat transfer and improves furnace efficiency. This reduces the initial heating time of the furnace from coal. It not only reduces the fuel consumption but also increases the furnace availability for higher production.
- The speed of combustion is increased, thus, further raising the flame temperature.
- The amount of excess air necessary for combustion gets reduced which further reduces the fuel consumption and also the scale/ burning losses of steel.

To sum up, Recuperators pre heat the combustion air from the fuel gases to recycle the waste heat back to the furnaces. It saves fuel, increases flame temperature and improves furnace thermal efficiency. Our recuperators are manufactured from high quality materials such as durable stainless steel and other exotic alloys. We offer customized solutions to suit your specific needs.

## Recovered waste heat is the cheapest source of energy - IT' S FREE!!

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