

# Travelling Grate



## TECHNICAL FEATURES

The curvature design of the grates keeps the grates closed without the aid of auxiliary weights, when making the turn around the sprockets. With this design, no gaps appear between the grates, thereby directing all foreign materials into the ash pit and not into the drive shaft mechanism.

In stoker firing, part of the fuel is burned in suspension and part on the grate. The fuel is projected across the furnace by a series of fuel feeders with a uniform spreading action, permitting suspension burning of the fine particles during travel. The larger pieces fall on the grate for combustion, forming a thin fast burning fuel bed from 1 to 2 inches thick.

This method of firing fuel provides for extreme load fluctuation as ignition is almost instantaneous on increase of firing rate and the thin fuel bed can be burned out rapidly when required.

The travelling grate has an extraordinary ability to burn any type of fuel with a wide range of burning characteristics with no limit on the ash content.

An over fire air system is provided for successful suspension burning. This air mixes with the furnace gases and creates the turbulence required to complete combustion.

To compensate for variation of the ash content in the fuel, the grate speed can be adjusted manually. The ash is continuously discharged over the front end of the grate into an ash pit or hopper.

## SALIENT FEATURE

CATENARY DESIGN provides for automatic take up or tensioning of grate chains to prevent jamming. Effective catenary is maintained by gravity, thus making external shaft adjustments unnecessary.

GRATE SURFACE consists of a series of grates specifically designed for spreader stoker firing. To reduce maintenance cost, grate surface is made in short sections (12" & 9") of best quality, heavy - duty, heat resisting cast iron alloy with uniformly spaced tapered self - cleaning air - metering openings and with close fitting overlapping edges to prevent air leakage at the joints.

GRATE CURVATURE design keeps the grate closed without the aid of auxiliary weights when making the turn around the sprockets, with this design, no gaps appear between the grates, thereby directing all foreign materials in to the ash pit and not into the driven shaft mechanism.

GRATE ACCESS is provided by a grate removal door. Design is such that any grate section can be replaced without taking the stoker out of service. Simply remove a single bolt, nut and washer and slide the grate off the grate bar.

GRATE SUPPORT within the furnace is provided by a series of skids and skid rails, each constructed of chill hardened cast iron for maximum life.

FRONT AND REAR SHAFT carry the grate chains on hardened sprockets. Bearings and sprockets are strategically located along the shafts for maximum load - bearing efficiency.

THE GRATE CHAIN are forged steel thereby eliminating breakage and grate shutdown.

FRONT AND REAR AIR SEALS automatically keep excess air to minimum within the furnace.

UNDERGRATE ACCESS DOORS located on each side of the stoker frame, provide inspection of and access to grate catenary.

HEAVY DUTY FLANGE COUPLING connecting hydraulic/Planetary drive and main drive shaft.