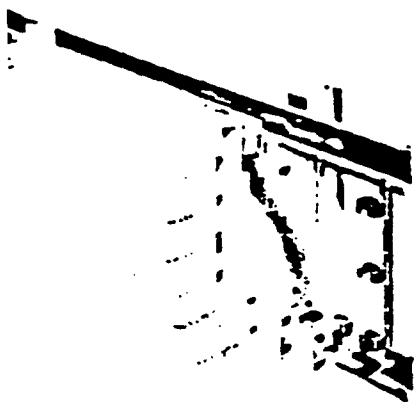
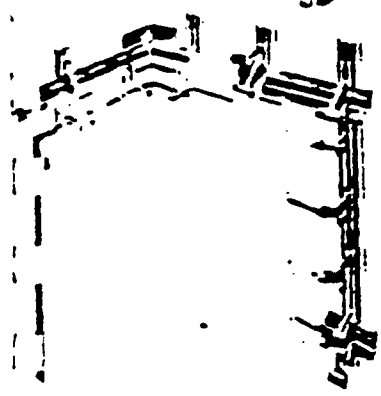
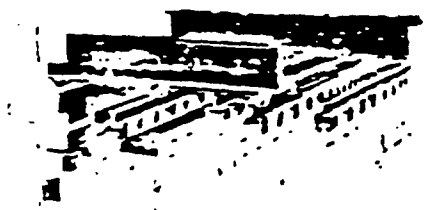










APPLICATIONS

OPEN HEARTH ROOFS
OPEN HEARTH UPTAKES
OPEN HEARTH REGENERATORS
COPPER REVERBERATORIES
COPPER WELL GAS FURNACES
COPPER ANODE FURNACES
SOAKING PIT COVERS
CONTINUOUS HEATING FURNACES
PUSH AND OUT HEATING FURNACES
ROTARY HEARTH FURNACES
FORGING FURNACES
ALUMINUM MELTING FURNACES
ALUMINUM HOLDING FURNACES
BOILER ENCLOSURES
WASTE HEAT BOILERS
BAKING BOILERS
PERMEATER ENCLOSURES
SUPERHEATER FURNACES
HOG FUEL FURNACES
BAGASSE FURNACES
BARK BURNING FURNACES
NORMALIZING FURNACES
ANNEALING FURNACES
STRESS RELIEVING FURNACES
ENAMELING FURNACES
GLASS TANKS
GLASS LEHRS
CEMENT CLINKER COOLERS
CEMENT KILN HOUSINGS
ROTARY DRYERS
DRYER FURNACES
BAFFLE FURNACES
SINTERING FURNACES
MUNICIPAL INCINERATORS
INDUSTRIAL INCINERATORS
CARBON BLACK FURNACES
REFINERY HEATERS
CATALYST REGENERATORS
CATALYST REACTORS
STACK LINERS
BREECHING LINERS
FLUE LINERS
DUCT LINERS

M. H. DETRICK CO.

DETRICK Heat ENCLOSURES

The Importance of Heat Enclosures

The success of a furnace is often completely dependent upon the design and construction of the heat enclosure. The heat enclosure must be tight. It must stand up under every extreme of operating conditions. Refractory quality has to be right. The heat enclosure must be designed and built for the special job it is called upon to do.

Only when these conditions are met can the user be reasonably sure of continuous, economical operation.

A Job for Specialists

The art of enclosing heat began when man first attempted to keep a fire within bounds. Since that day, each new advance has been achieved because someone found a way to overcome each new difficulty.

As furnaces began to be used for new and more complex processes, each such process created problems peculiar to its own special conditions, and the design of suitable heat enclosures became a task for specialists. M. H. Detrick Co. occupies a special place in industry today because its more than 45 years of cumulative knowledge and experience, the skills and understanding of its highly trained engineers, have been concentrated on the problems of heat enclosure design and construction.

The Scope of Detrick Service

M. H. Detrick Co. offers to industry its facilities, its knowledge, and its experience in the design and construction of heat enclosures for every process where furnaces are used. In these few pages we can do no more than suggest the wide range of that service and the types of construction Detrick has developed to meet the heat enclosure needs of industry in all its branches.

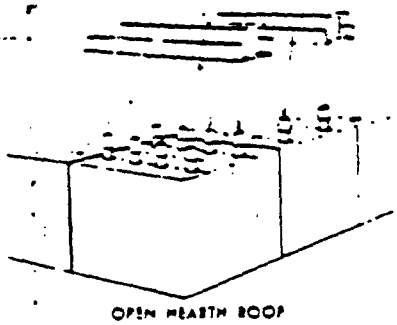
Detrick welcomes the opportunity to discuss your special heat enclosure problems and to help you solve them.

21 West Street, New York
Oliver Building, Pittsburgh
111 W. Washington St., Chicago

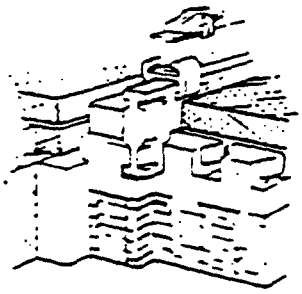
Bulletin D-30

PLAINTIFF'S EXHIBIT
MHD-185

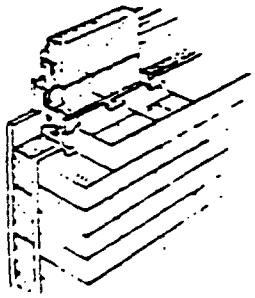
Suspended Arch and Wall Construction—the Tools of Heat Enclosure Design



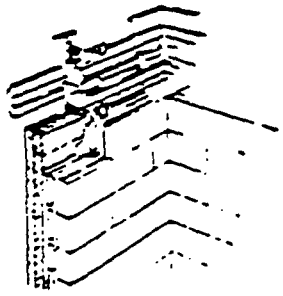
OPEN HEARTH ROOF



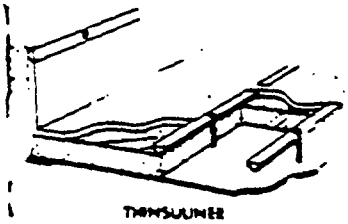
REFRACTORY HANGER ARCH



DETEGRAL WALL



THINSULITE WALL



THINSULINER

Detrick suspended construction is an engineered system of supporting refractories and insulation in integrated units. They are furnished in many types based on the kind of refractories used and service conditions encountered. All Detrick designs have the following fundamental characteristics.

- Structural support allows use on any span and for any height.
- Flexibility of suspension allows use for any shape or contour.
- Sectional supports eliminate cumulative loading and expansion of refractories.
- Refractory and insulation thickness can be governed by temperature and operational requirements.
- Local repair can be made without disturbing the surrounding area.

arches

Flat suspended arches form the roof or cover of the heat enclosure. They are designed for various refractory types, basic, silica, fireclay and insulating. Thickness of refractories and insulation application vary with temperature. Constructions are available for every service condition.

walls

Wall designs are available for different refractory types and temperature conditions. For high temperature conditions, they can be furnished in air cooled designs. Where heat loss is a problem they can be fully insulated and sealed against air infiltration or gas migration.

liners

For intermediate and lower temperature ranges, refractories are not as vulnerable to erosion and spalling. Here the refractory acts primarily as a shield for the insulation. Liners with thin refractory tile and maximum insulation are designed with economy of material and labor in mind. Layer construction with a simple supporting structure allows speedy and low cost installation.

curtains

A unique construction supported from the top, in which tile are hung together in link form. A wall without internal structural support which can be exposed to heat on both sides. Can be placed in any position front wall, back wall, or baffle wall. Permits placing of slots or opening in any furnace without restriction of usual fire brick construction.

accessories

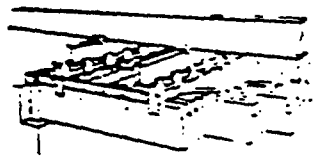
No heat enclosure is complete unless accessory equipment is available to fit the wall or arch construction. Detrick has equipment available for all types of Access, Observation, Lance, and Explosion doors—Burner rings—Drum seal—Dampers—Feed openings. All are designed to be part of the Arch and Wall structure.



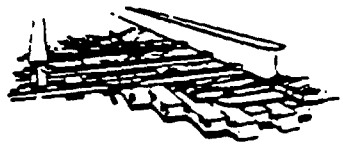
REFRACTORY CURTAIN



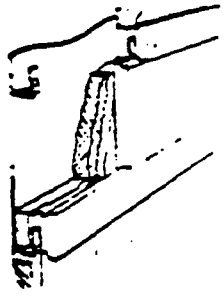
TYPE G WALL



INSULATING REFRACTORY ARCH



THINSULITE ARCH



THERMOLATER LINER