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Fosbel End Flue Rebuilds  
Dated: Unknown

*Recovered from site on March 13 2021*

# FOSBEL, INC.

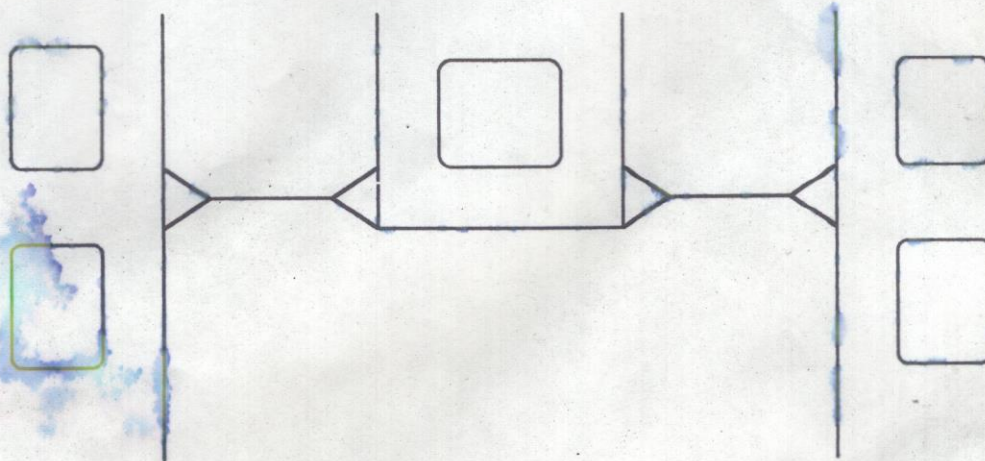
*Ceramic Welding Specialists  
Silica Brick Experts*

## END FLUE REBUILDS

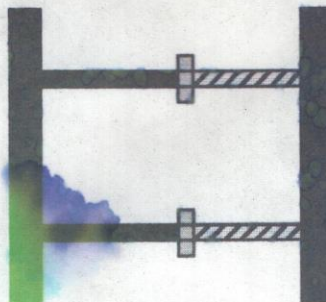
*A review of rebuilding  
Coke oven wall ends,  
from one to any number of flues.*

## PREPARATION FOR TEAR-OUT

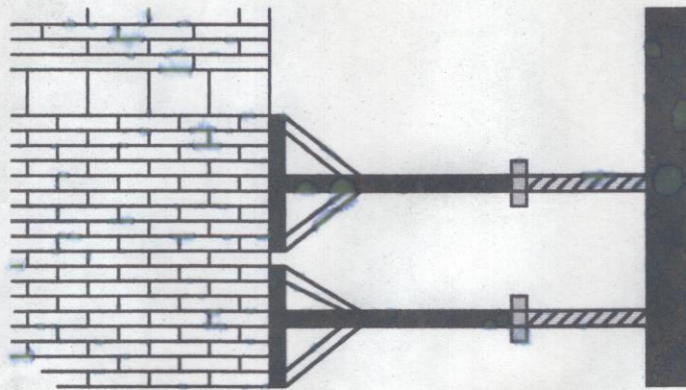
The key to success after heat-up is the proper bracing to the first existing flue left after tear-out and proper insulation of the adjacent walls. A bulk-head is installed into the ovens on each side of the wall being repaired. (this can exist of insulation brick or double two inch ceramic fiber) Ceramic fiber blanket is applied to the adjacent walls. Bracing between walls is installed before tear-out of wall begins.



These braces are placed where there is a cross member every two feet in height, insuring that they are against a filler brick (brick between flues)



Bracing is also installed from the existing end flue to the buckstave, as illustrated;



Proper bracing insures that the existing end flue will not move in either direction, therefore no vertical crack can form behind the flue.

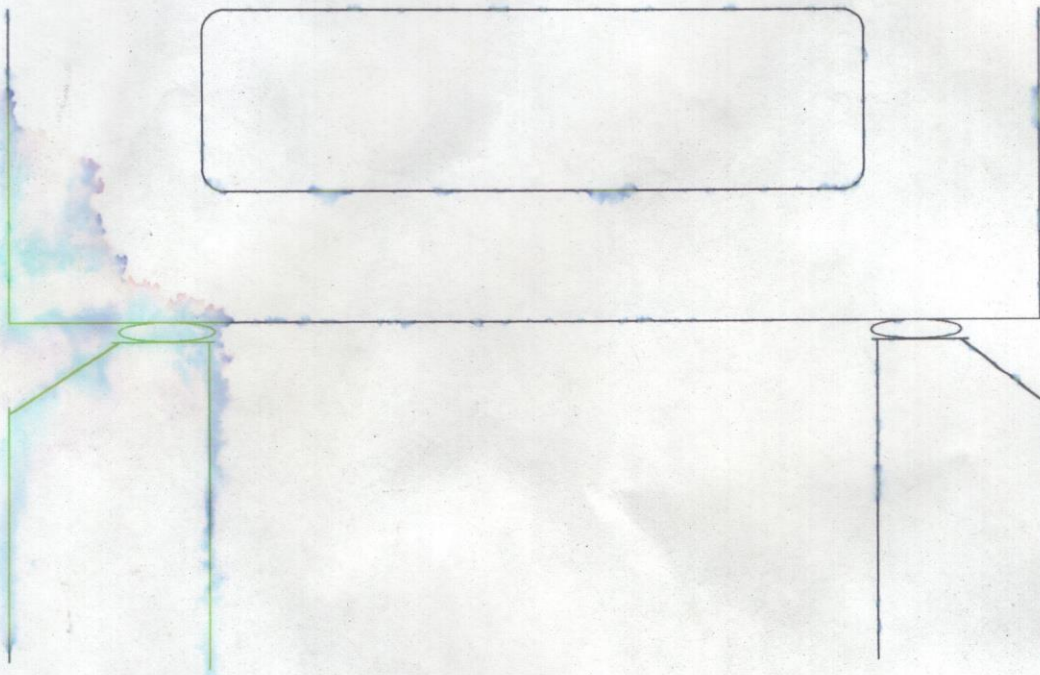
Careful monitoring of the temperature in that flue is imperative, keeping it at a temperature that will insure that the burner will ignite.

Ceramic fiber blanket is placed into the horizontal flue, to prevent heat loss.

## REPLACEMENT OF BRICK

Placement of the wall is different for the Coke side than for the Pusher side. The Pusher side wall is placed flush with the existing wall, while the Coke side wall should be set in three-eighths of one inch to insure that a "edge" does not form on the wall after heat-up.

A vertical weld "tie in" joint is left at the point where the new repair meets the existing brick-work. This joint is left one and one half inches wide and one and one half inches deep.



After the brick-work is completed, wall braces are installed on the flue just in front of the weld joint, to insure stability of that flue during heat-up.

Insulating cement is used between the new repair and door frame and buck staves. The width of this expansion joint is dependent on the number of flues being rebuilt. After heat-up this area is either gunned or welded.

If the ceiling and roof are left intact, insulation cement is used in the top joint for expansion. Here again, the height of the wall will determine the width of the insulation joint.

After repair is completed, scaffold apparatus is removed and repair is ready for heat-up.

With careful planning, qualified personnel, and a commitment to safety, end flue re-builds by FOSBEL net customer satisfaction.

/gmc