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In-Plant Training Workshop on
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REFRACTORIES PRODUCED IN THE
STATE COMPANY OF GLASS INDUSTRIES
IN IRAQ

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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

The manufacture of our glass plant includes sheet glass from one furnace and many kinds of bottles and other glass wares from other furnaces. To satisfy the need of refractories, our ceramic shop produces 1,000 tons of several shapes of neutral ceramic according to the chemical reaction of the melting raw materials.

The technical data of the ceramic are:

Chemical composition:

SiO ₂	54.5 %
Fe ₂ O ₃	0.35 %
Al ₂ O ₃ + TiO ₂	39.71 %
CaO	0.4 %
MgO	0.64 %
K ₂ O	2.77 %
TiO ₂	1.28 %
L.O.I	10.56 %

Physical Characteristics of fire bricks used:

SP.GR. 1.75 g/cm³

Heat resistance 1.690°C

Increase in size after annealing is no more than 0.5 mm at temp. 1.400°C

Porosity for bottom bricks is no more than 22 %

for wall bricks porosity is no more than 19 %

tensile stress no more than 250 kg/cm².

Types of products manufactured:

1. Flinger shapes made from fire clay which annealed to 200°C are used in the vertical machine of the sheet glass furnace.
2. Plungers used in bottle furnaces at the end of feeders to control the cup's volume.
3. Neutral fire bricks used to build bottoms and walls of furnaces at cooled state after annealing.

