



شرکت مهندسی و خدماتی  
هیدرولیک کاران

IRITEC ابریک  
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# GHAENAT Steel Complex

## Pictorial Report

**Direct Reduction Furnace**

**Power Unit**

Client:

**IRITEC**

Prepared by:

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**Engineering Division**

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This page has been designed in order to update our customers on hydraulic system for Ghaenat Direct Reduction Furnace. In this project Hydraulic Karan should manufacture all required cylinders for Upper and Lower Slide Gate, Upper, Lower and Middle Burden Feeders. More over 4 power units (Upper Slide Gate, Upper Burden Feeder, Middle & Lower Burden Feeder and Lower Slide Gate) with required control panel will be made for controlling whole furnace hydraulic systems. We designed the hydraulic system based on Eaton-Vickers products. It is worth mentioning that all electrical components for upper and lower slide gate are explosion proof. Please see the figures below; this is a pictorial report of current situation of this project.

Cylinders for upper and lower slide gates middle and lower Burden Feeder have been assembled and tested by our staff under supervision of customer inspector in our test rig. Moreover, all test result have recorded and approved by customer inspector. With respect to customer inquiry ultrasonic test was performed by an authorized company on welded part of Cylinders Fig 3).



Fig 1-Slide Gates Cylinders



Fig 2-Middle Burden Feeder Cylinders



Fig 3 – Ultrasonic Test

Hydraulic unit for Upper Burden Feeder was finished and was tested completely by customer inspector. It's worth mentioning that all tested data was recorded and available for citation. Functionality of proportional valve, flow meter, and load sensing system and so on have been checked and verified. Moreover, hydraulic unit has been flushed and its cleanliness level was reached by using appropriate filter elements (fig 5).



Fig 4 – Upper Burden Feeder Power Unit



Fig 5 – Cleanliness level test for Upper Burden Feeder



Figure 6 shows the test result of upper burden feeder power unit in different situations.

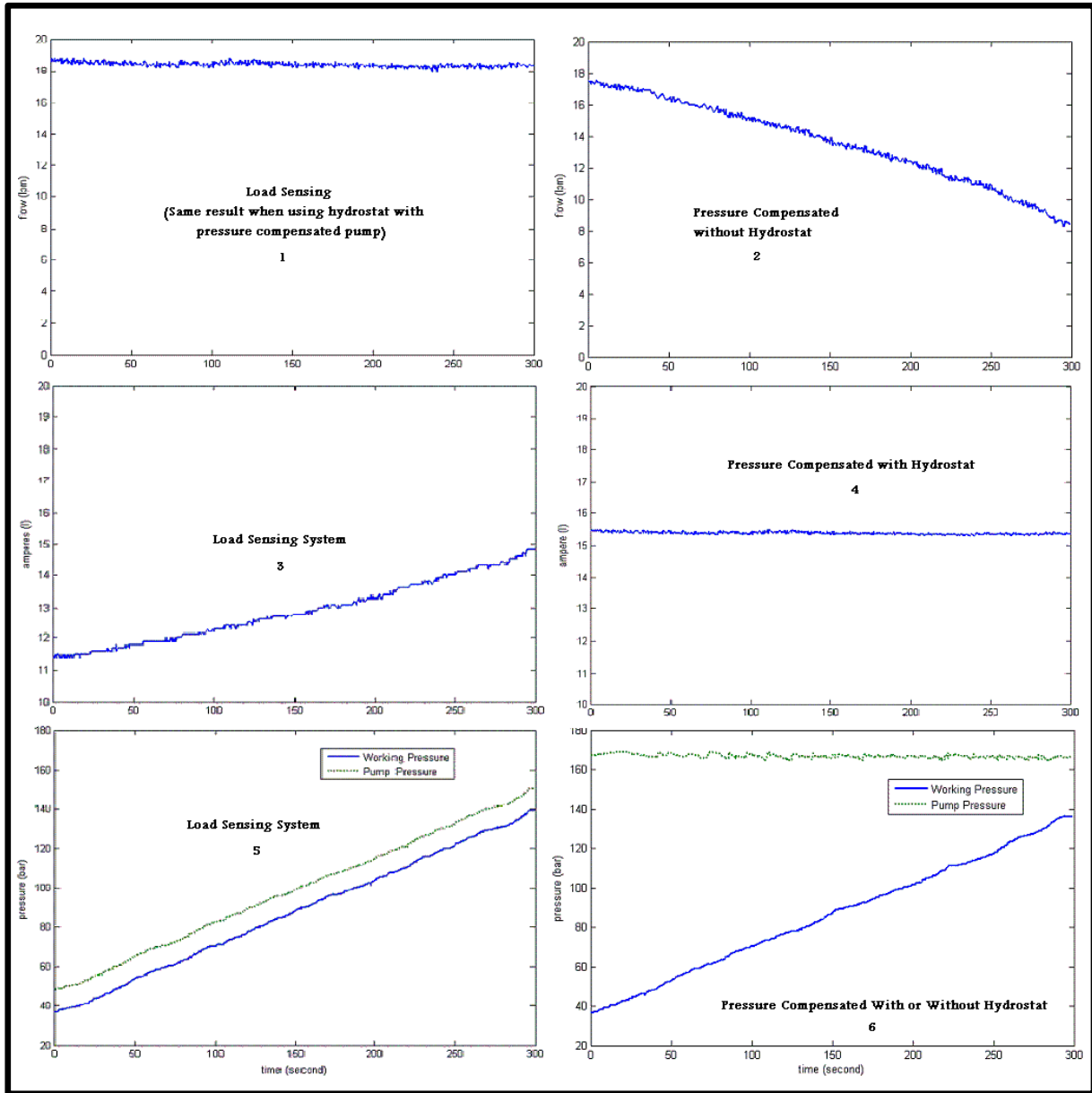


Fig 6 – Upper Burden Feeder Test Result