

Hasco-Thermic Ltd: Digitalisation of the Galvanizing Industry

NORDIC GALVANIZERS' ANNUAL AND
MEMBER MEETING

23rd April 2019

Agenda:

- A little bit about Hasco – case studies
- Digitalisation – what is it?
- Hasco's 3 new products
 - **1. HASCO REMOTE SOLUTION®**
 - **2. HASCO SMART FIRING**
 - **3. HASCO QUALITY CONTROL**
- Conclusion



Parent Company - B E Wedge Holdings

- Galvanizing since 1850's
- Largest Galvanizing Group in United Kingdom
- Galvanize at 14 locations in United Kingdom
- Interests in over 40 plants Worldwide
- Access to Proving Ground
- Honest Product Feedback
- Practical Galvanizing Experience

34 Countries

- Austria
- Belgium
- Chile
- Czech Republic
- Egypt
- Germany
- Ghana
- Greece
- Hungary
- India
- Indonesia
- Israel
- Ireland
- Italy
- Kenya
- Libya
- Lithuania
- Malta
- Mauritius
- Morocco
- Netherlands
- Nigeria
- Oman
- Russia
- Saudi Arabia
- Slovakia
- South Africa
- Spain
- Switzerland
- Taiwan
- Turkey
- United Kingdom
- USA
- Zimbabwe

Latest References



Customer Testimonial

On the installation of the highest capacity galvanizing furnace in the world:

'there was no question who we were going to trust with the furnace, Hasco are the high velocity guys.'

Ozgun Keles, Project Manager
Mitas Galvanizing, Turkey

Joint project with Ingenia Cranes, Austira and Körner kvk Tanks, Austria - Commissioned end 2014

- Kettle Size: 12.5 x 1.8 x 3.5
- No of burners: 8 burners
- Capacity: 25 tonnes per hour average
- Maximum Capacity: 39.5 tonnes per hour
- Annual Production – 75,000 tonnes

- Scope of supply:
 - High-Velocity Galvanizing Furnace
 - Flue gases to water heat exchanger
 - 5 Compartment Drier
 - In-line zinc bath fume enclosure



Latest References

Transvaal, South Africa

First furnace – installation 2011

- Kettle Size: 12.5 x 1.2 x 1.8
- No of burners: 6 burners
- Capacity: 11.5 tonnes per hour

Second furnace – installation Summer 2014

- Kettle Size: 12.5 x 1.2 x 1.8
- No of burners: 6 burners
- Capacity: 11.5 tonnes per hour

Third furnace – installation Winter 2016

- Kettle Size: 15.5 x 2.0 x 3.2
- No of burners: 6 burners
- Capacity: 15 tonnes per hour



Latest References – Case Study



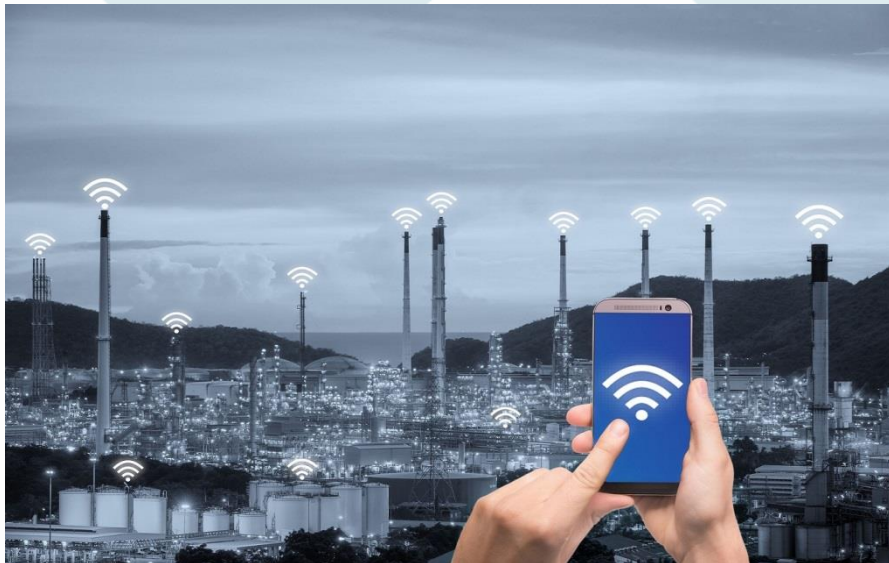
ACROW Galvanizers Ltd, UK - installed 2016

- Kettle Size: 5 x 1.2 x 3.3
- No of burners: 4 burners
- Capacity: 10 tonnes per hour
- Scope of supply:
 - High-Velocity Galvanizing Furnace
 - ‘Pilling’ Galvanizing Kettle
 - Travelling Galvanizing Enclosure
 - Single Compartment Drier
 - Gas-to-water Heat Exchanger
 - Installation and Commissioning
- Features
 - Siemens S7 Control Panel with Profibus protocol
 - Inverters on all Fans
 - Digital Solutions

Industry 4.0

Digitalisation

Big Data



*‘What gets measured,
gets better’*

FASCO
FERRMIC

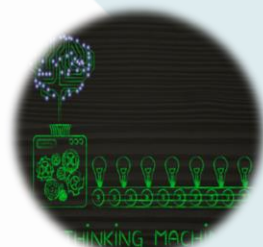
Digitalisation



**Hasco
Remote
Solution ®**



**Hasco
Smart
Firing**



**Hasco
Quality
Control**



**Smart and
Connected
Plants**



As secure as on-line Banking...



Hasco-New Product Range

- **1. HASCO REMOTE SOLUTION®**



Furnace

20/02/2016
11:34:00 AM

- Back
- Burners
- PID
- Ramp
- Energy Consumption
- I/Os
- Setup
- Reset



THC 01	THC 02	THC 03	THC 04	Setpoint
846.1 °F	846.1 °F	844.9 °F	844.0 °F	842.0 °F
THC 05	THC 06			
858.7 °F	865.6 °F			

System

Start Command: OK

Start Stop

SYSTEM HEALTHY

NORMAL RUNNING

Ramp Status: COMPLETE

Burner Status: LOW FUEL

Damper: Closed

Breakdown

Emergency: Emergency

Kettle Leak: Healthy

Lock: Lock

Warning: Warning

- Furnace
- Heat Exchanger
- Trend
- Network
- Alarms
- Engineer



Hasco-New Product Range

- **1. HASCO REMOTE SOLUTION®**
- **2. HASCO SMART FIRING**

Effect of Hasco Smart Firing™

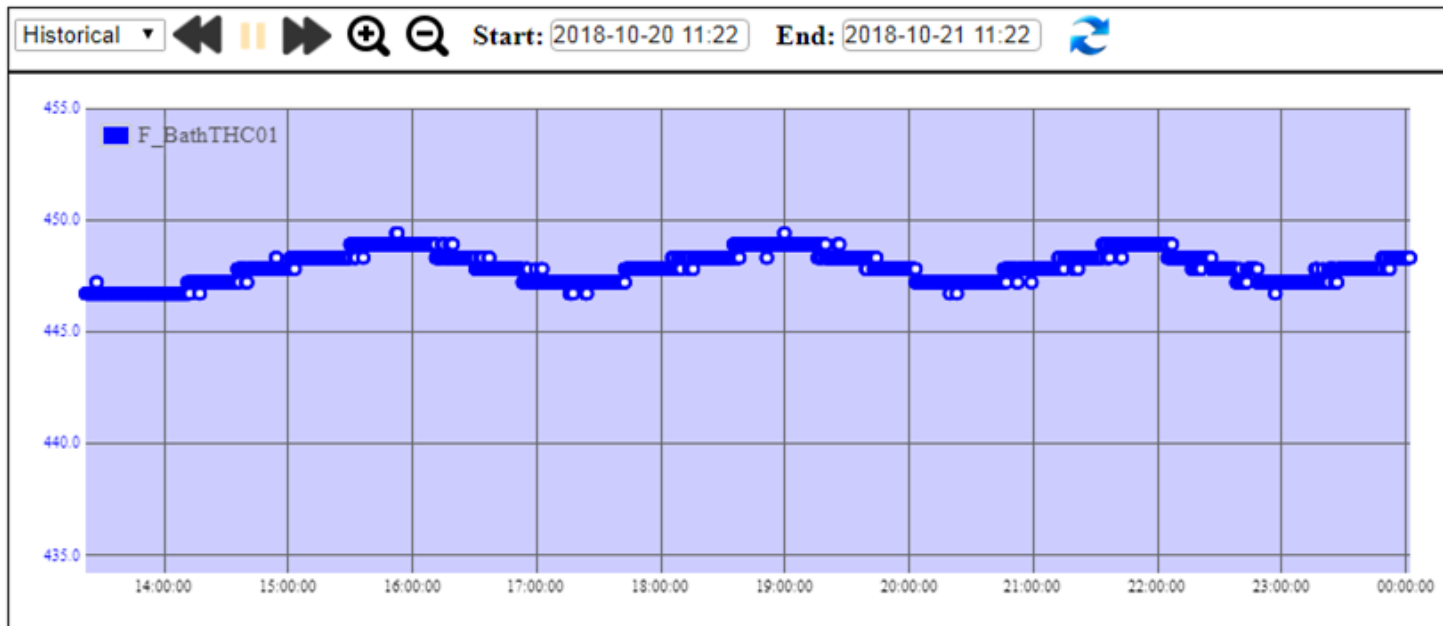
Before (Traditional Pulse Firing)

Log Out



Trend

Furnace Bath Temperature (°C)



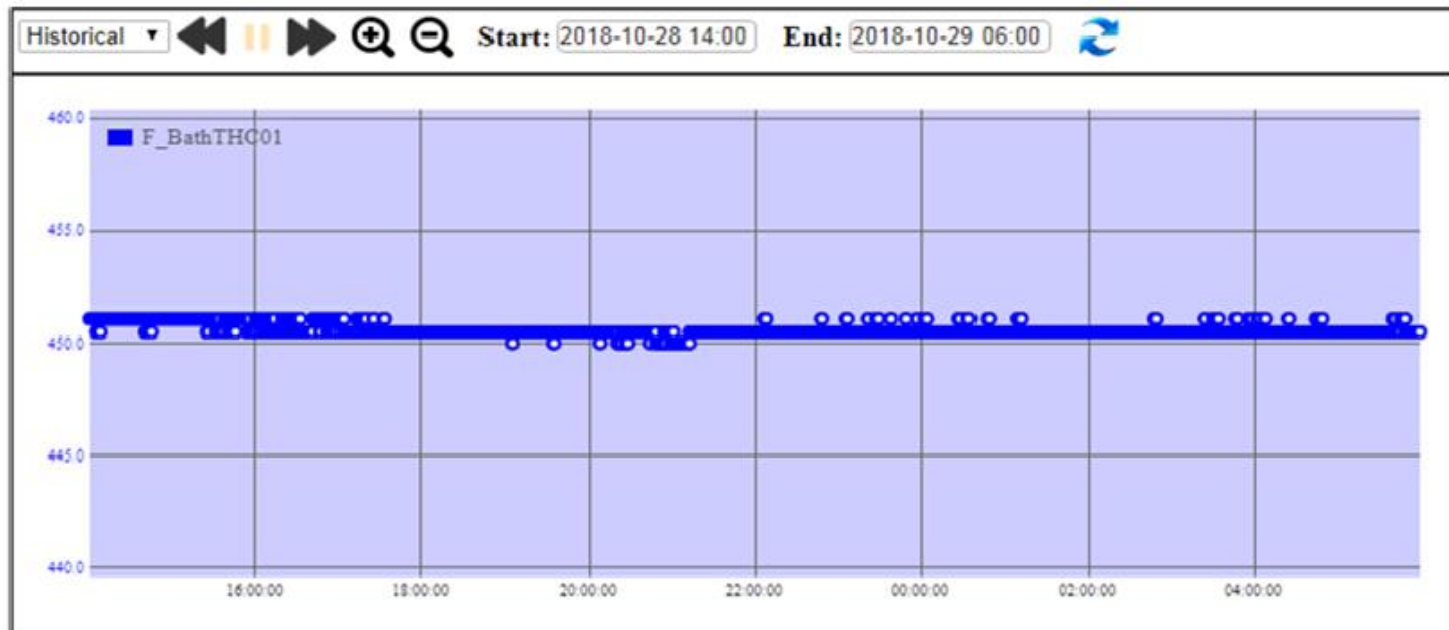
Effect of Hasco Smart Firing™

After (Hasco Smart Firing™)



Trend

Furnace Bath Temperature (°C)



Smart Firing Case Studies

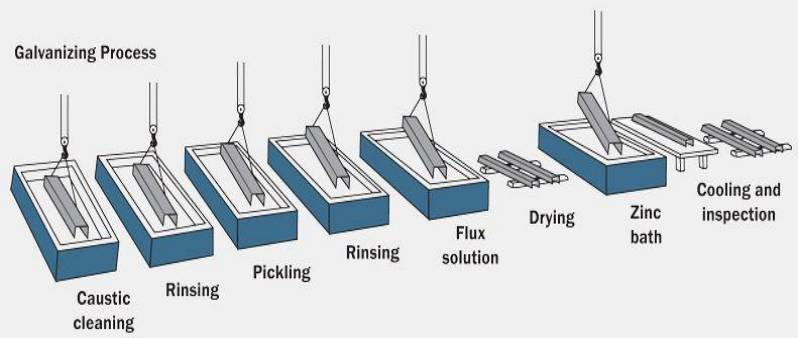
- Case 1 (running since 2016)
5250 x 1200 x 3300 - Annual gas saving 21.3%
- Case 2 (running since 2017)
10250 x 1220 x 2700 - Annual gas saving 10.8%
- Case 3 (running since 2018) - retrofitted
13500 x 1750 x 3100 - Annual gas saving 12.5%

Hasco-New Product Range

- **1. HASCO REMOTE SOLUTION[®]**
- **2. HASCO SMART FIRING**
- **3. HASCO QUALITY CONTROL**

Configure your plant

Plant Name	Serial Number	Owner	Asset Type
WedgeAC	Serial Number	Hasco Thermic	Hasco Thermic Thing...
WedgeEAG			Hasco Thermic Thing...



See the data



Plant Healthy key

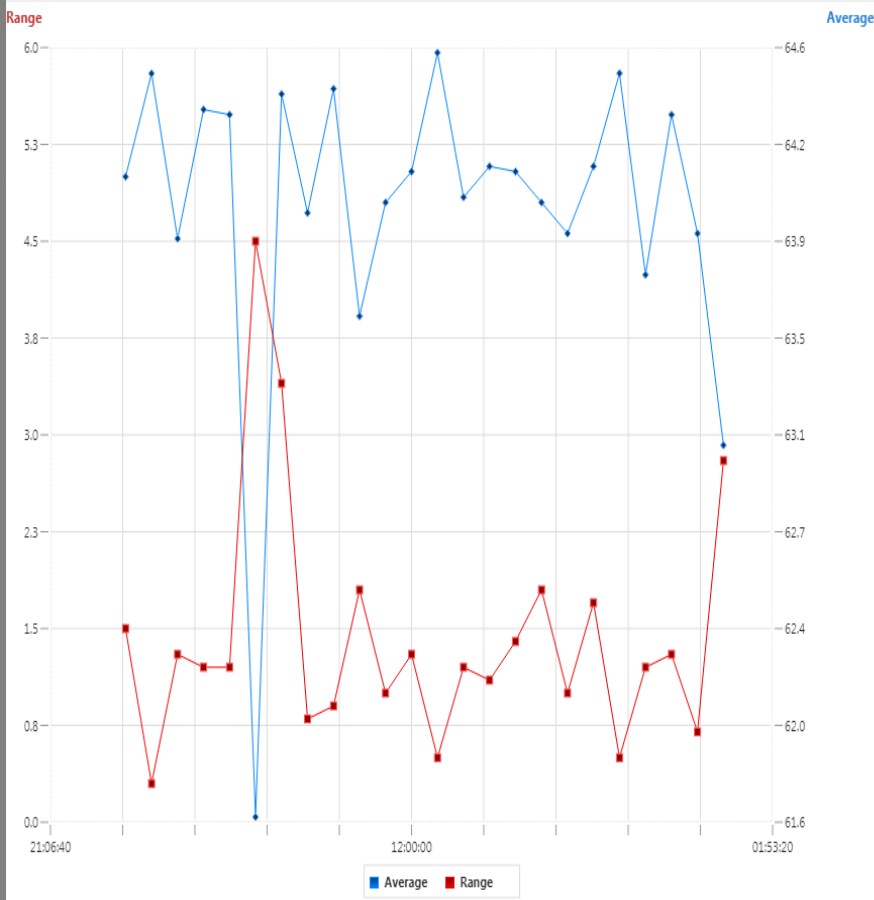
- Ok
- Caution
- Attention
- Disconnected
- Acknowledged

Process Parameter
Flux Tank Temperature

Specification		
Min(LSL)	Nominal	Max(USL)
60.0	65.0	70.0

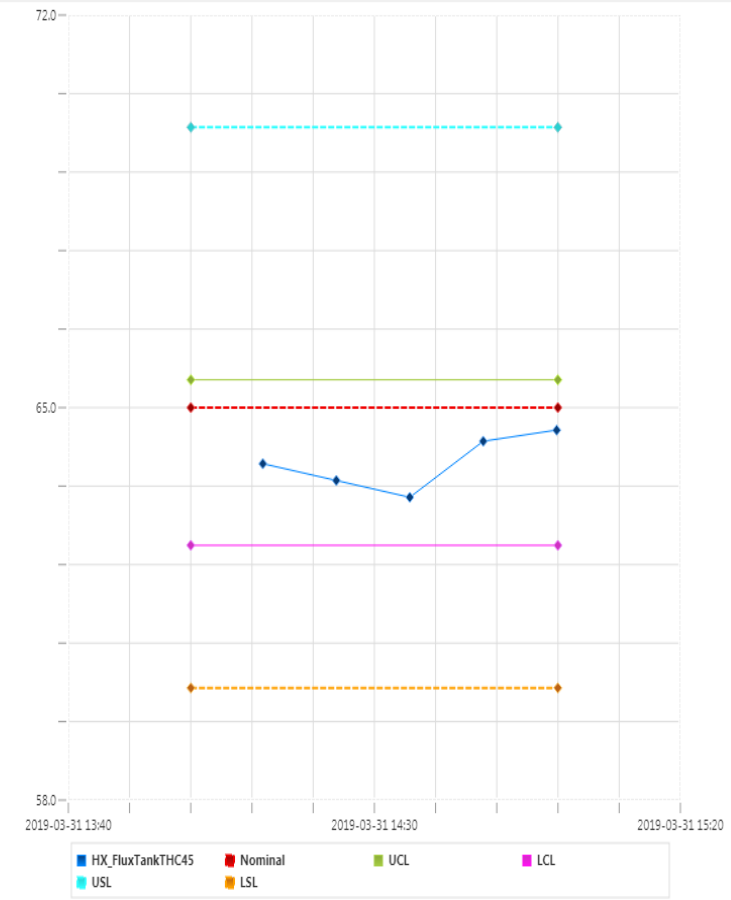
Graphs | Raw Data

Day Statistics
01-Apr-2019



Hour Statistics
13:00 AM

Cp: 3.39 Cpk: 2.72



Search

Hasco Thermic

- WedgeAC
- WedgeEAG

Benefits

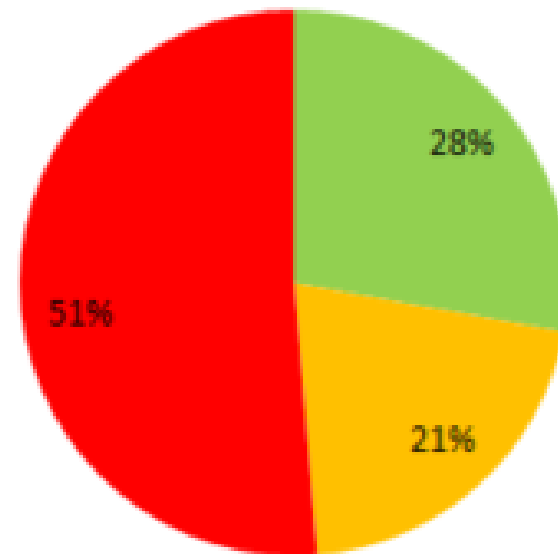
- Automatically harvesting data – no need for manual readings
- Manual data can be uploaded
- One place for all plant data
- Accurate trends and events to be tracked, understood and analysed
- Automated alarms and notifications against agreed control limits.
- Improved connectivity – any equipment can be connected
- Drive behaviours
- Implementation of Statistical Process Control (SPC)

Cost of Quality

- **Failure**
 - Re-galvanizing
 - Lost opportunity
- **Prevention**
 - Quality Manager
 - Training
- **Appraisal**
 - Sampling
 - Auditing
 - Inspecting

Cost Of Quality YTD

■ Total Prevention Cost ■ Total Appraisal Cost ■ Total Failure Cost



= GBP £10,000 per month = SEK 120,000 per month

*‘What gets measured,
gets better’*

Angela Curtis

Mobile Number +44 7771 932 834

E-mail: angelac@hasco.co.uk