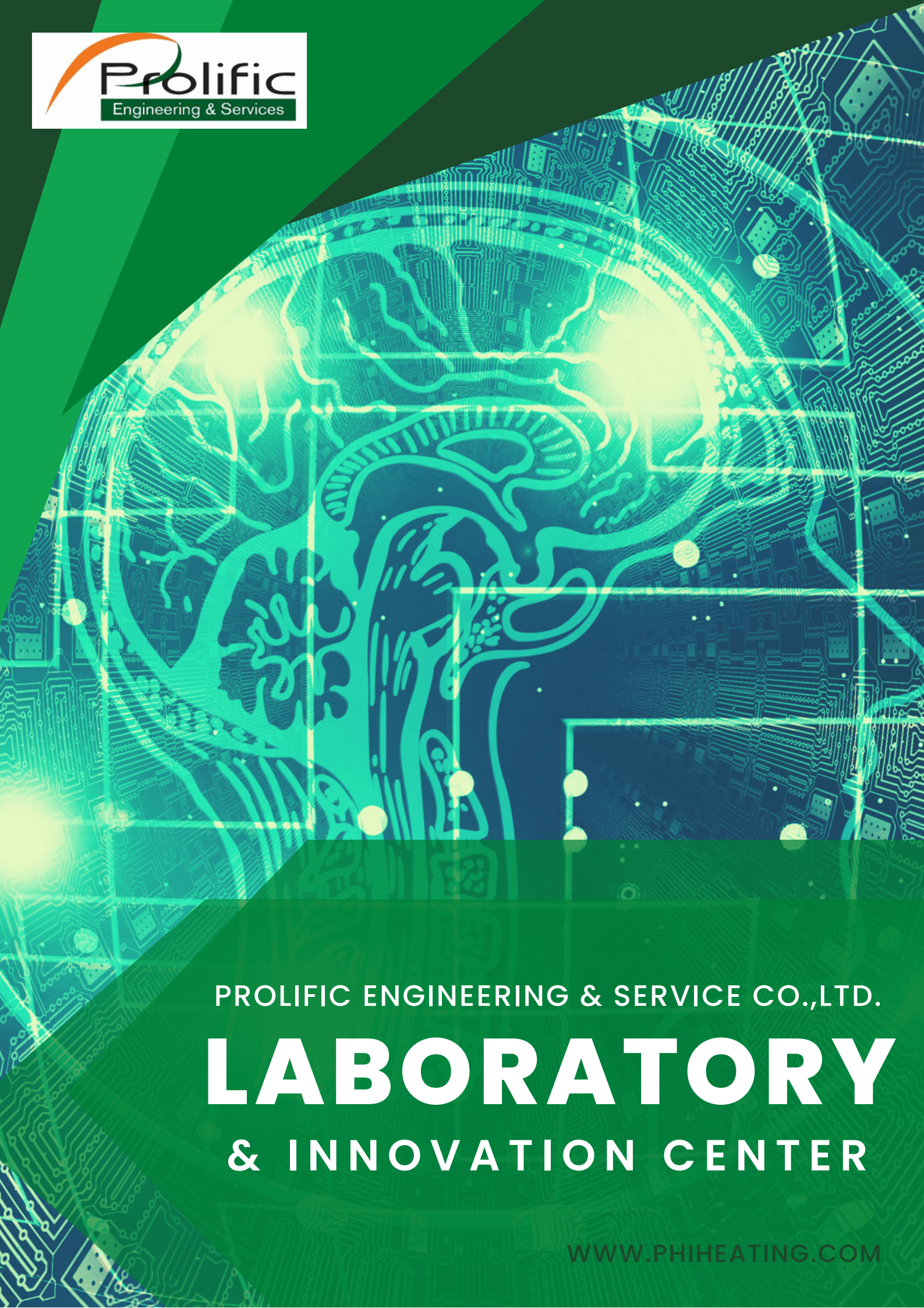


PROLIFIC ENGINEERING & SERVICE CO.,LTD.

LABORATORY

& INNOVATION CENTER

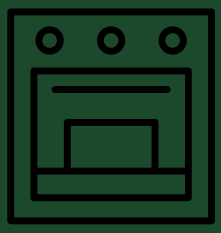
WWW.PHIHEATING.COM

“ OUR SERVICE ”

THERMOCOUPLE CALIBRATION LABORATORY

SAT

(SYSTEM ACCURACY TEST)



TUS

(TEMPERATURE UNIFORMITY SURVEYS)

IIOT

(INDUSTRIAL INTERNET OF THING)

CALIBRATION LABORATORY

NSC-TISI-TIS 17025
CALIBRATION 0427

ใบรับรองระบบงาน
(Certificate of Accreditation)

Thermocouple Calibration Laboratory Accredited with ISO/IEC 17025

WHAT CAN WE DO?

- Thermocouple type
  : S, R, K
- Temperature range
  : 100°C to 1200 °C
- Size
  : OD. Ø= 1 mm - 13 mm
  At least 150 mm in length

- CMC: Calibration & Measurement Capability

	K	S, R
100°C - 600°C	±2.9°C	±3.2°C
>600°C - 1200°C	±3.8°C	±3.8°C

CALIBRATION SCOPE

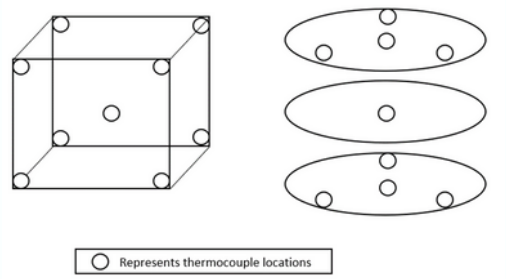
"FURNACE HEALTH CHECK UP"

TEMPERATURE UNIFORMITY SURVEY (TUS)

Validation of Temperature uniformity characteristics, qualified work zones, and operating temperature for furnaces and ovens.

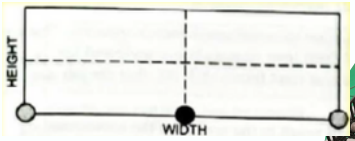
Reference Standard : CQI-9

PES can test temperature from 100 °C to 1200 °C



Period of TUS

- 1 time per year
- If change new Thermocouple , change new Extension wire or Compensating wire , change new temperature controller , overhaul insulation . TUS shall be performed.



Method of TUS

- volumetric method
- plane method

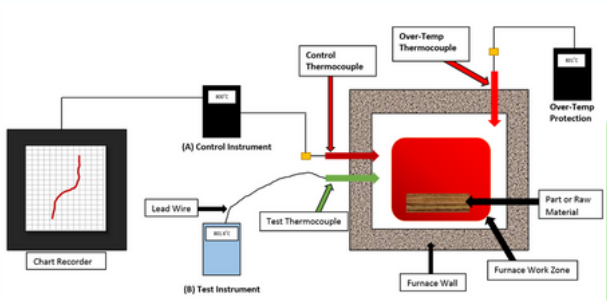
SYSTEM ACCURACY TEST (SAT)

Test to ensure the accuracy of the temperature control and monitoring system

Reference Standard : CQI-9

Method of SAT

- Probe method A
- Probe method B
- Comparative Method



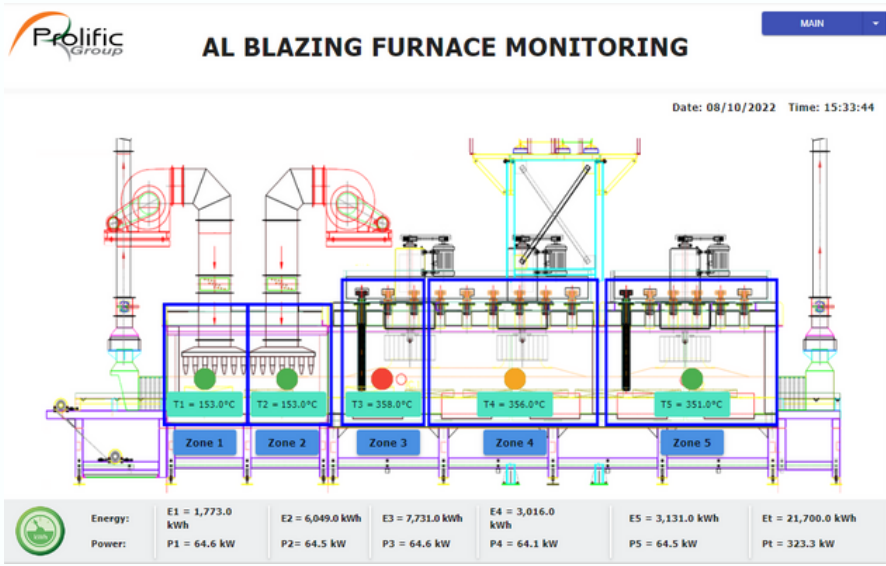
Frequency to perform SAT

- Every 3 months / Furnace for Probe method
- Every 1 month / Furnace for Comparative method

IIOT

" INDUSTRIAL INTERNET OF THINGS "

Prolific Groups is cooperating with KMITL to develop a smart furnace system by using IoT (Internet of Things) technology and reverse engineering to monitor the critical parameters of furnace operation to optimize the furnace performance, reducing downtime through Preventive maintenance (PM) planning and spare parts inventory management.



BENEFIT OF IIOT

Reducing manufacturing process data error

Reducing unplanned breakdown

Instant notification Machine Failure

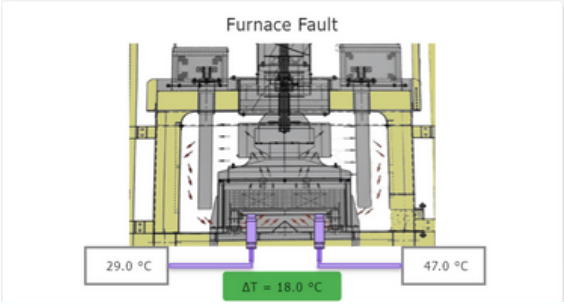
Real Time Monitoring of Furnace or Machine Parameters

In the future customers can upgrated to Predictive Maintenace (Pdm) program when the furnace parameters data are adequately gathered for further analysis

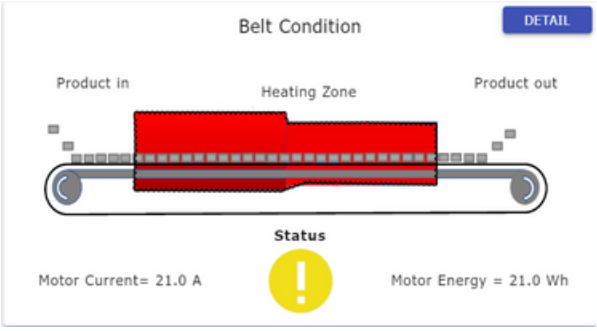
IIOT

" INDUSTRIAL INTERNET OF THINGS "

EXAMPLE DATA MONITORING FROM IIOT SOLUTION



- THERMODYNAMIC CONDITION
(E.G. TEMPERATURE AT FURNACE ENTRANCE OF ALUMINIUM BRAZING FURNACE)



- MESH BELT CONDITION

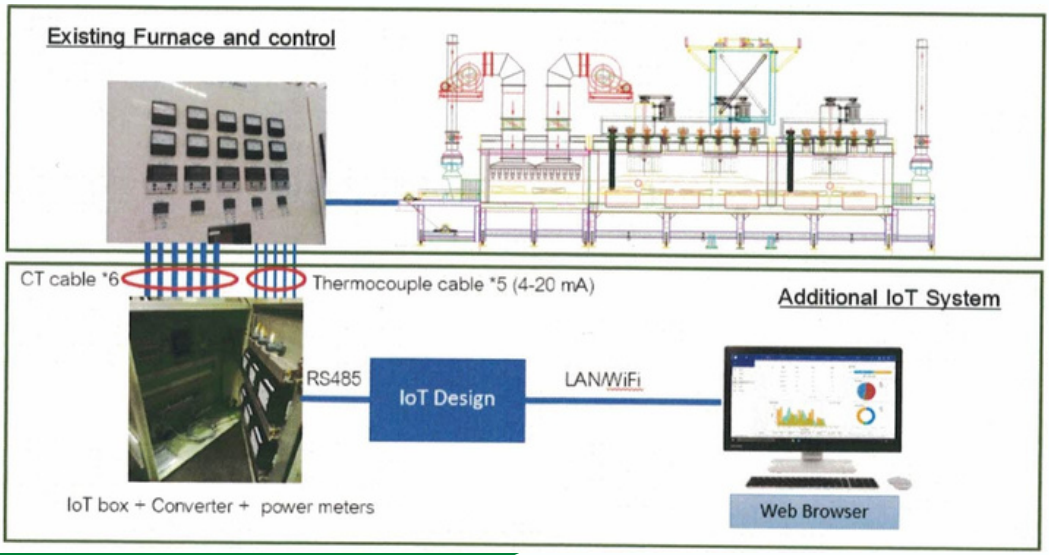
- OVERALL POWER CONSUMPTION

EASY TO IMPLEMENT :

Implementation of Smart Furnace System with The Used Original Furnace Control System

We will support our users in adding or replacing the furnace equipment to support the Bus communication protocol (e.g., RS-485) to use IoT Platform easier & seamlessly

Ready to use with all furnace from Prolific Group !!!



CONTACT US

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