

A Journey Towards SMART Manufacturing

01



PROCESS MONITORING MODULE

Track, measure and monitor entire process, purchase to dispatch and from production to management level



02



DATA MANAGEMENT SYSTEM

Connect, and manage the data collected from systems, sensors, machines and people like never before



03



SMART MEASUREMENT DEVICES

Smart measurement devices measure the quality of raw material using innovative concept of IIoT



04



QUALITY PROGNOSIS SYSTEM

Quality prognosis is the solution for deeper trending and predictive analytics to bring the future into focus



05



DATA ANALYTICS SYSTEM

Data Analytics is the solution for identification of critical parameters and their specific range of values to achieve desired quality



Udhog 4.0

Industry 4.0 also sometimes referred to as Industrial Internet of Things (IIoT) or SMART Manufacturing. This innovative philosophy mainly focuses on connecting physical with digital by synergic interface between hardware and software through internet technology. This further emphasizes on inter-connectivity, automation, machine learning, and real-time data monitoring to create more holistic & interconnected ecosystem for manufacturing enterprises.

Udhog 4.0 (U4) is a start-up initiation by professionals in 2019, and mainly provides technological solutions related to emerging technologies such as Industry 4.0. The U4 rejuvenates the existing manufacturing enterprise, and will transform it into SMART manufacturing enterprise. This will in turn reinvent the manufacturing process for you.

The U4 will assist in acquiring the data from the process through sensors, streaming the acquired data to cloud, performing data analytics for identification of critical parameters affecting the quality.



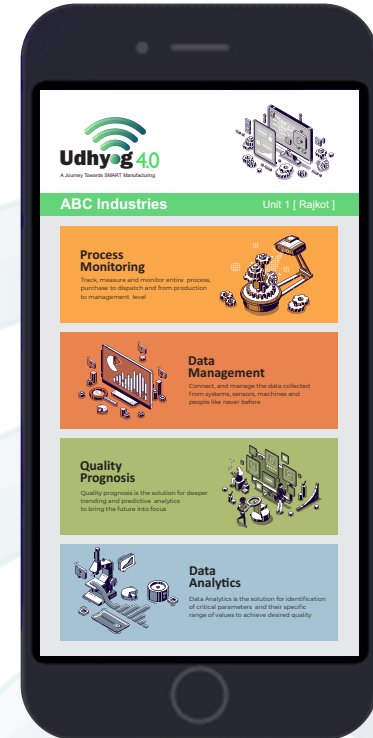
The U4 pioneer in supplying SMART Measurement Devices that will help in measurement of wax and shell used in investment casting foundries as per guidelines of Investment Casting Institute (ICI) USA. The U4 also equipped with SMART Measurement Laboratory that provide services for measurement of wax and shell. Implementation of different products of The U4 will change perception of the classical manufacturing enterprise, and leads to SMART Factory in future.

A JOURNEY TOWARDS

SMART

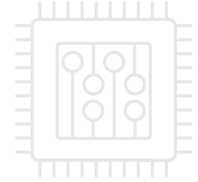


REINVENT MANUFACTURING PROCESSES,
AND TRANSFORM THE CLASSICAL MANUFACTURING
INTO SMART MANUFACTURING.





HARDWARE PROCESS MONITORING MODULE



HARDWARE

Process Monitoring Module (PMM) - Hardware is used to capture data directly from machines and provide real-time production metrics. This will further be used in real time visualization using dashboard or smart devices. The process monitoring module helps in

- Rejuvenating existing machine, and transform it into SMART machine
- Measuring and monitoring the process parameters for 24/7
- Eliminating manual intervention in data collection
- Receiving instant alerts for machine conditions, cycle process variations and efficiency
- Improving cycle times and in turn productivity





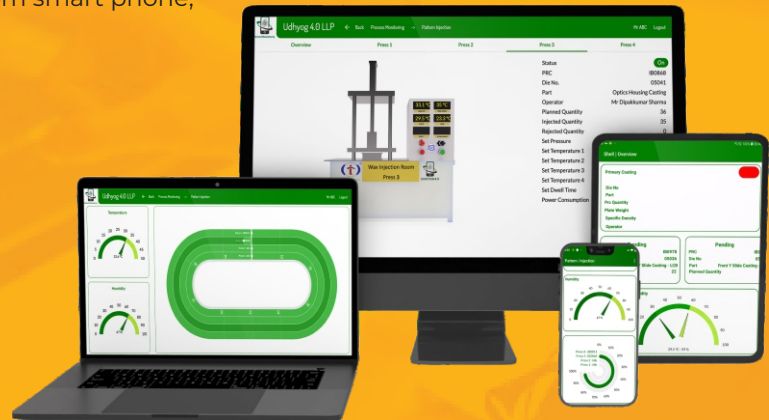
SOFTWARE PROCESS MONITORING MODULE



SOFTWARE

Process Monitoring Module (PMM) - Software ensures complete visibility into your systems from any remote location. A user-friendly applications and automation solutions make your field operations more efficient. Seamless integration provides real-time visibility from your computer as well as mobile. Process Monitoring Module helps in

- Integrating machines with your SMART devices
- Monitoring shop floor in real time using the data collected through PMM-Hardware
- Accessing process parameters from smart phone, tablet or laptop
- Improving operational insight
- Driving field productivity
- Shrinking response time and making system agile





SOFTWARE

MANUFACTURING DATA MANAGEMENT SYSTEM (MDMS)



SOFTWARE

Manufacturing Data Management System (MDMS) helps manufactures to transform existing manufacturing enterprise into SMART manufacturing enterprise. MDMS eliminates inefficiencies and helps in making better decisions using accurate, easy-to-read real-time information. MDMS answers tough questions to improve productivity, lower costs, and gain competitive edge. MDMS further helps in

- Connecting and managing the data collected from sensors, systems, machines and people like never before
- Identifying capacity assessment and process planning
- Evaluating planned activities
- Computing efficiency of man, machine and plant
- Integrating Quality Management System as per AS 9001; ISO 9001; IATF 16949; ISO/IEC 17025
- Preparing collected information for future representation and data analytics





SOFTWARE MANUFACTURING DATA ANALYTICS SYSTEM (MDAS)



SOFTWARE

Manufacturing Data Analytics System (MDMS) helps manufactures in prognosis as well as diagnosis the quality metrics through two sub-modules Quality Prognosis and Data Analytics. MDAS answers questions: what will happen next ? Why it was happened ? MDMS further helps in

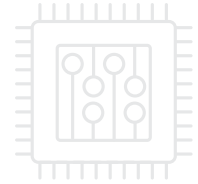
- Collecting information related to Statistical Process Control (SPC) and Statistical Quality Control (SQC)
- Identifying critical parameters and their specific range of values to achieve desired quality
- Eliminating manual analysis for better and faster strategic decisions
- Leveraging production information for futuristic planning
- Driving continuous improvement in process





HARDWARE

SMART MEASUREMENT DEVICES



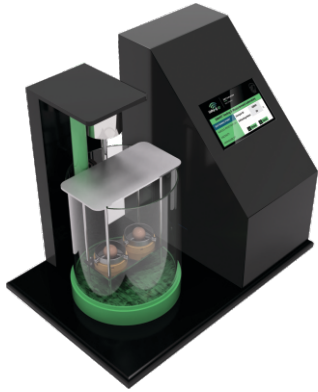
HARDWARE

SMART Testing and Measurement Devices help user to conduct different tests including softening point, needle penetration, viscosity and hot & green permeability for ceramic shell as well as industrial wax used in investment casting foundries. These SMART devices further helps in

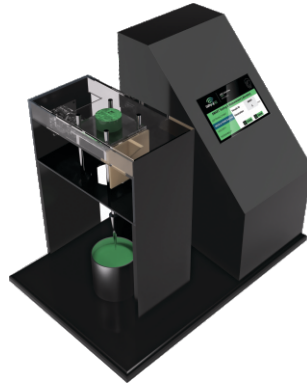
- Testing the quality of raw material used in investment casting foundries as per guidelines of Investment Casting Institute (ICI) – USA
- Reducing efforts of computations of test parameters (permeability, viscosity, etc.)
- Recording and monitoring test parameters through smart devices
- Assuring quality of castings

Softening Point ● Needle Penetration ● Viscosity ● Permeability

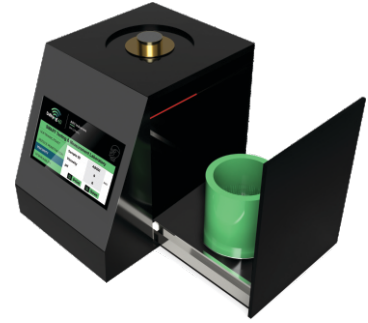




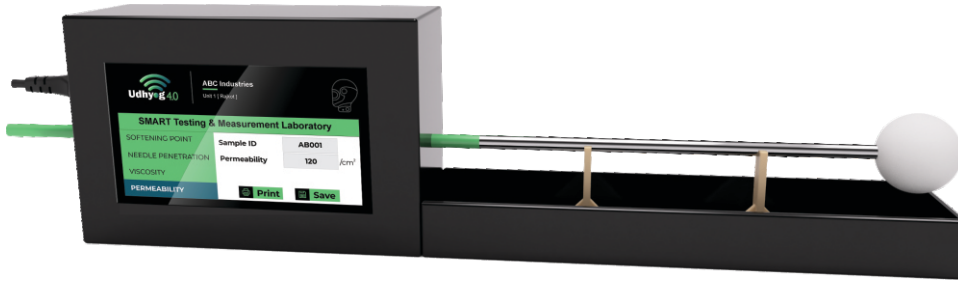
Softening Point



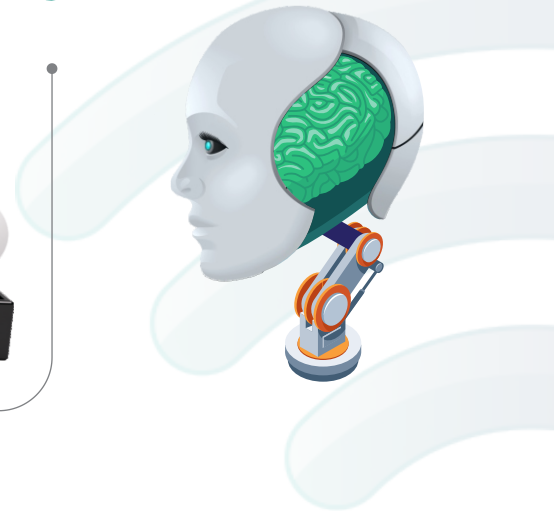
Needle Penetration



Viscosity

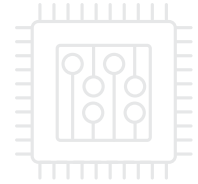


Permeability





Hardware Intelligent Inspection Device



HARDWARE

Intelligent Inspection Device helps manufacturer to check component for dimensionality check as well as surface discontinuities. This device is developed using fundamentals of image processing. This devices further helps in

- Inspecting the component for its dimensions and check for its conformance with technical specification provided
- Inspecting the component for surface discontinuities, and check for its conformance of acceptance or rejection
- Categorizing the surface discontinuities

launching **soon**



FOUNDERS



Mr Philip Gajera

Graduate in Mechanical Engineering,
Successful entrepreneur since more than 20 years in the field chemical and fertilizer manufacturing.



Mr Pinal Kantesariya

M Tech from IIT Kharagpur
Experience of more than 5 years in the field of manufacturing and pioneered in the field of Metallurgy.



Dr Amit Sata

PhD and M Tech from IIT Bombay

Experience of more than 20 years in field of manufacturing and pioneered in the field of SMART Manufacturing





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FOLLOW

