Smart MELT

KEEP TRACK OF YOUR STEEL PRODUCTION ANYWHERE. ANYTIME.

Chemical Composition

Quality Control

ERP Synchronisation

Trends

Temperature Measurment

Alloy Consumption

Smart MELT
Digitalize your Steel Making.

Reports

Operation Time

Energy Consumption

Cost Calculation

Scrap Calculation

COMPLETE DATA SYNCHRONISATION ACROSS MULTIPLE SITES

UNISONS

@unisonssteelsolutions

Smart MELT

DIGITALIZE YOUR STEEL MAKING.

ACCESS YOUR DAILY PRODUCTION, REPORTS, TRENDS AND ERP

ANYWHERE, ANYTIME.

Smart Melt is a new innovation in the world of Metallurgy. It is an application by Unisons that allows users to completely digitalize their Steelmaking process and make their day-to-day trends and reports available to them anywhere, anytime!
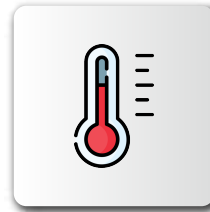
From the Scrapyard to final production, Smart Melt has the capability to record, maintain and display all data to you which will help you to analyze your production cycle in a more efficient and profitable way.
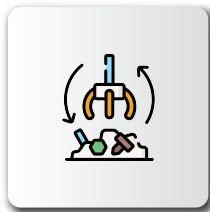
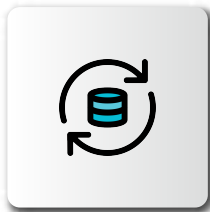Sampling Time & Spectro Test Results
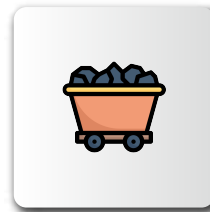
Furnace Operation Time & Power Usage

Record Temperatures & Tapping Time

Calculation of Scrap Utilization

Synchronize Alarms & Monitoring Systems

Keep track of Alloy Consumption

Consumed Units

Meter	Consumed Units (kwh)	Start Reading	Start Date	End Reading	End Date
Meter 03	3440	43624200	Tue, Jan 14, 2025, 12:27 PM	43627640	Tue, Jan 14, 2025, 2:33 PM
Meter 04	3424	43435410	Tue, Jan 14, 2025, 12:27 PM	43438830	Tue, Jan 14, 2025, 2:33 PM
Meter 02	3560	44351700	Tue, Jan 14, 2025, 12:27 PM	44355260	Tue, Jan 14, 2025, 2:33 PM
Meter 01	3536	44212350	Tue, Jan 14, 2025, 12:27 PM	44215890	Tue, Jan 14, 2025, 2:33 PM

Energy Analyzer

Tensile Strength & Elongation Testing
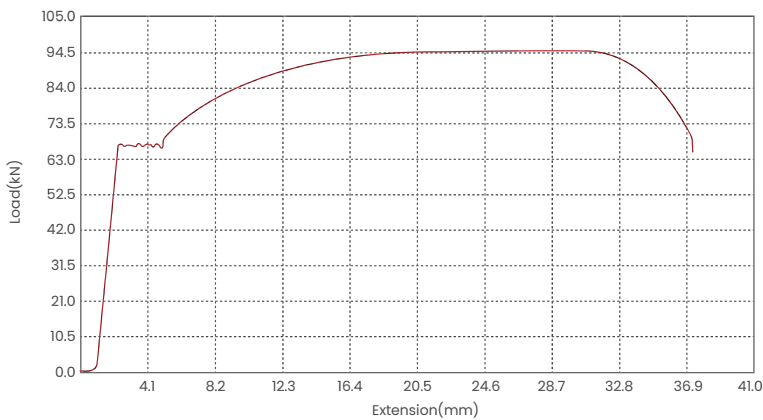
Universal Testing Machine

Initial Composition

C	Si	Mn	P	S	Cr	Mo	Ni	Al	Co	Cu	Nb	Ti	V	W	Pb	Sn	As	B	Zn	N	O
0.3	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.38	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Final Sample

Laddle Sample [Take Laddle Sample]

C	Si	Mn	P	S	Cr	Mo	Ni	Al
0.277384	0.235123	0.933157	0.029096	0.037757	0.189261	0.009201	0.062479	0.001642

Temperature Sample [Take Temperature Sample]

C	Si	Mn	P	S	Cr	Mo	Ni	Al
0.315291	0.285019	0.811928	0.027421	0.037243	0.201621	0.010058	0.068712	0.003039

Slag Sample [Take Slag Sample]

C	Si	Mn	P	S	Cr	Mo	Ni	Al
0.239555	0.017984	0.0672	0.022831	0.033158	0.150337	0.008094	0.061833	0.34367
0.310941	0.023332	0.069893	0.025138	0.031875	0.156813	0.009657	0.066988	0.03323
0.294057	0.031472	0.089302	0.02638	0.035203	0.186048	0.010664	0.069191	0.05931

Tue, Jan 14, 2025, 2:34 PM •

D-0125295 complete heating
Tue, Jan 14, 2025, 2:33 PM •

Heat has been tapped
Tue, Jan 14, 2025, 2:33 PM •

13960 units consumed
Tue, Jan 14, 2025, 2:33 PM • System Log

Stop power readings

Meter	Reading
Meter 03	43627640
Meter 04	43438830
Meter 02	44355260
Meter 01	44215890

Tue, Jan 14, 2025, 2:33 PM •

Slag sample has been taken

C	Si	Mn	P	S	Cr
0.310941	0.023332	0.069893	0.025138	0.031875	0.156813

Tue, Jan 14, 2025, 1:46 PM •

Alloys has been suggested

Spectro Machine

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Track stoppage time, duration and reasons.

Smart Melt allows users to track stoppages during the melting process, record the time when the stoppage occured, the total duration as well as the reason for the stoppage.

Heat Stopped

D-0125259 stopped heating
Sun, Jan 12, 2025, 9:27 PM •

Heat stoppage reason Shift to crucible
Sun, Jan 12, 2025, 9:27 PM •

Heat Resumed

D-0125259 resume heating
Sun, Jan 12, 2025, 9:47 PM •

Heat stoppage duration 00:20:14
Sun, Jan 12, 2025, 9:47 PM • System Log

Calculate Scrap to Yield percentage

Smart Melt enables precise calculation of the scrap-to-yield percentage during the melting process. By tracking the amount of scrap input and the resulting output of the final product, it provides valuable insights into material efficiency and process optimization. This feature helps reduce waste, improve cost-effectiveness by analyzing different blends of scrap and ensure consistent production quality.

100% Scrap input

96% Yield output
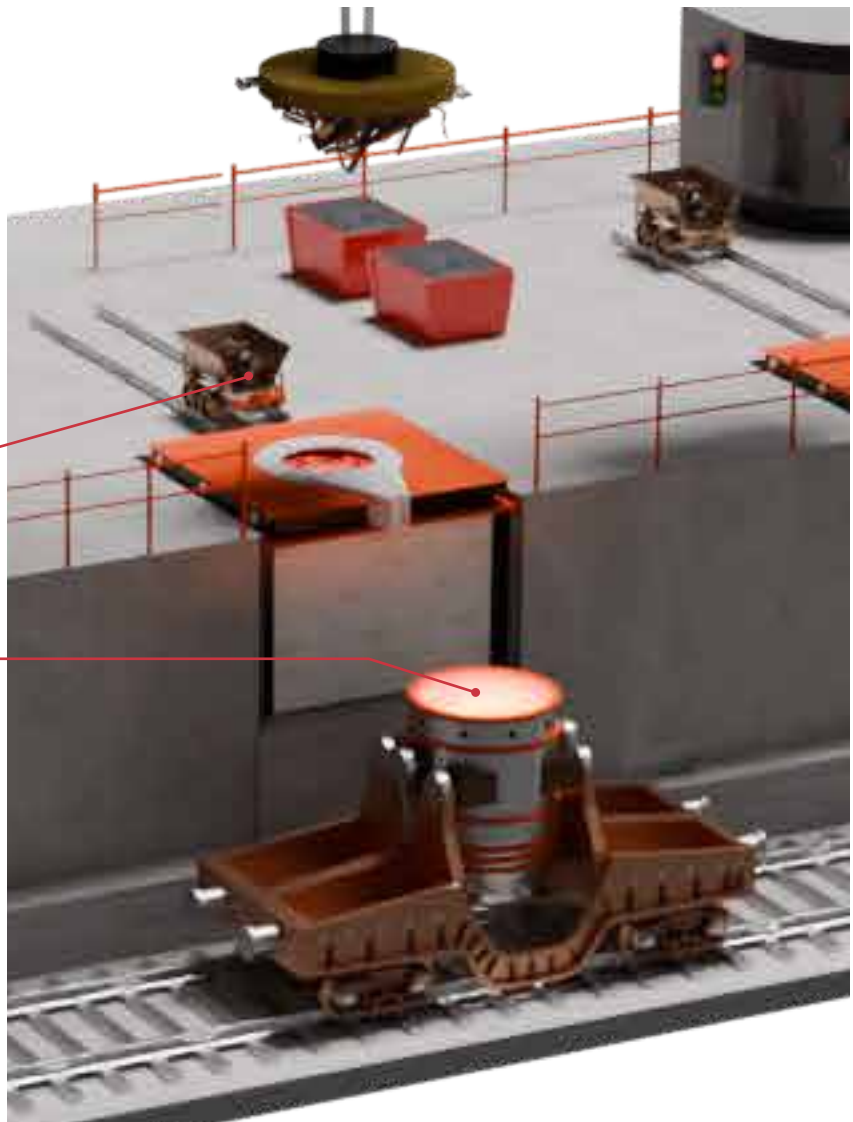
Furnace Operation Time and Usage

Smart Melt assists in achieving a higher level of efficiency and performance of the induction furnace through digitalized tracking of operation time and power consumption. The following graphs illustratethe relationship between operation time and power consumption, offering insights into energy usage patterns during the melting process.

By automating key functions, **Smart Melt** helps streamline furnace operations, reduce energy costs, and enables real-time analysis and informed decision-making for overall enhanced productivity.

Manage inventory and material usage.

Monitor inventory and keep a record of material usage with ease.
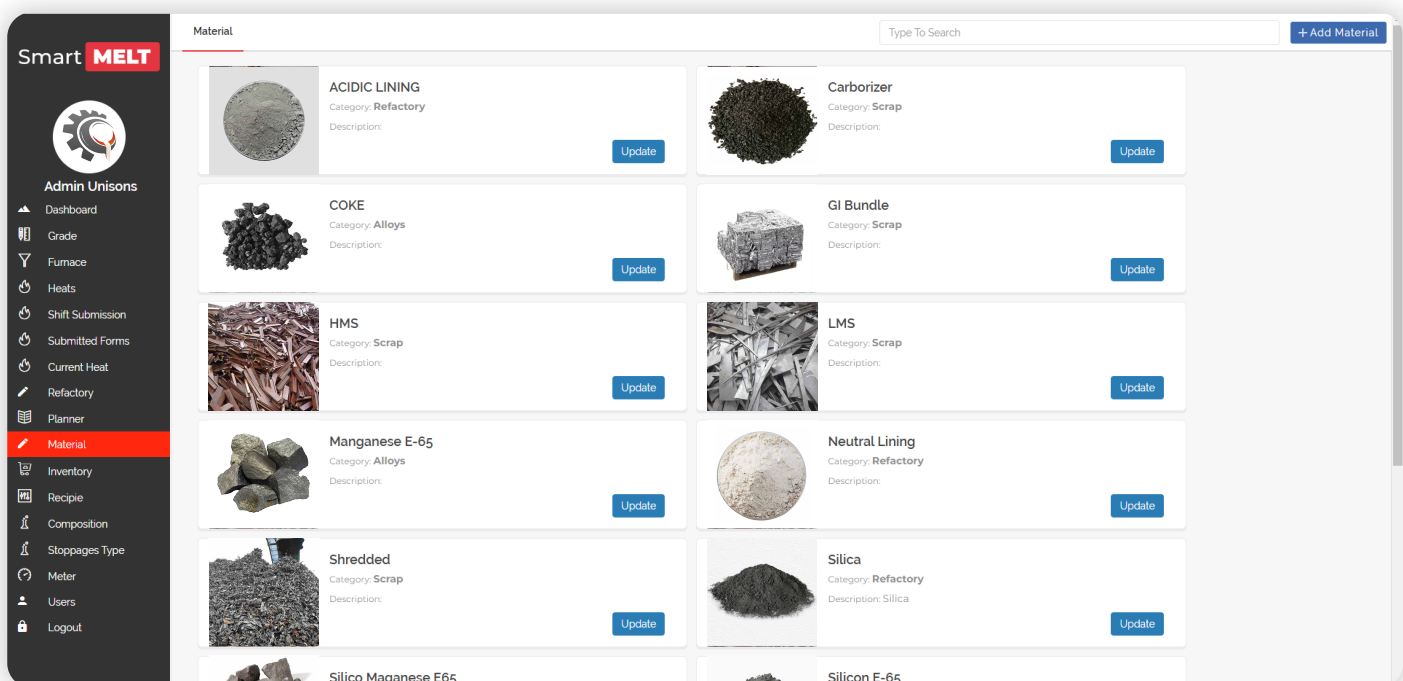
Record Temperatures and Tapping Time

Efficiently record and monitor furnace temperatures and tapping times throughout the melting process. This feature ensures accurate data logging for quality control, process optimization, and improved consistency in operations.

With real-time tracking, Smart Melt enables better decision-making and enhances overall furnace performance.
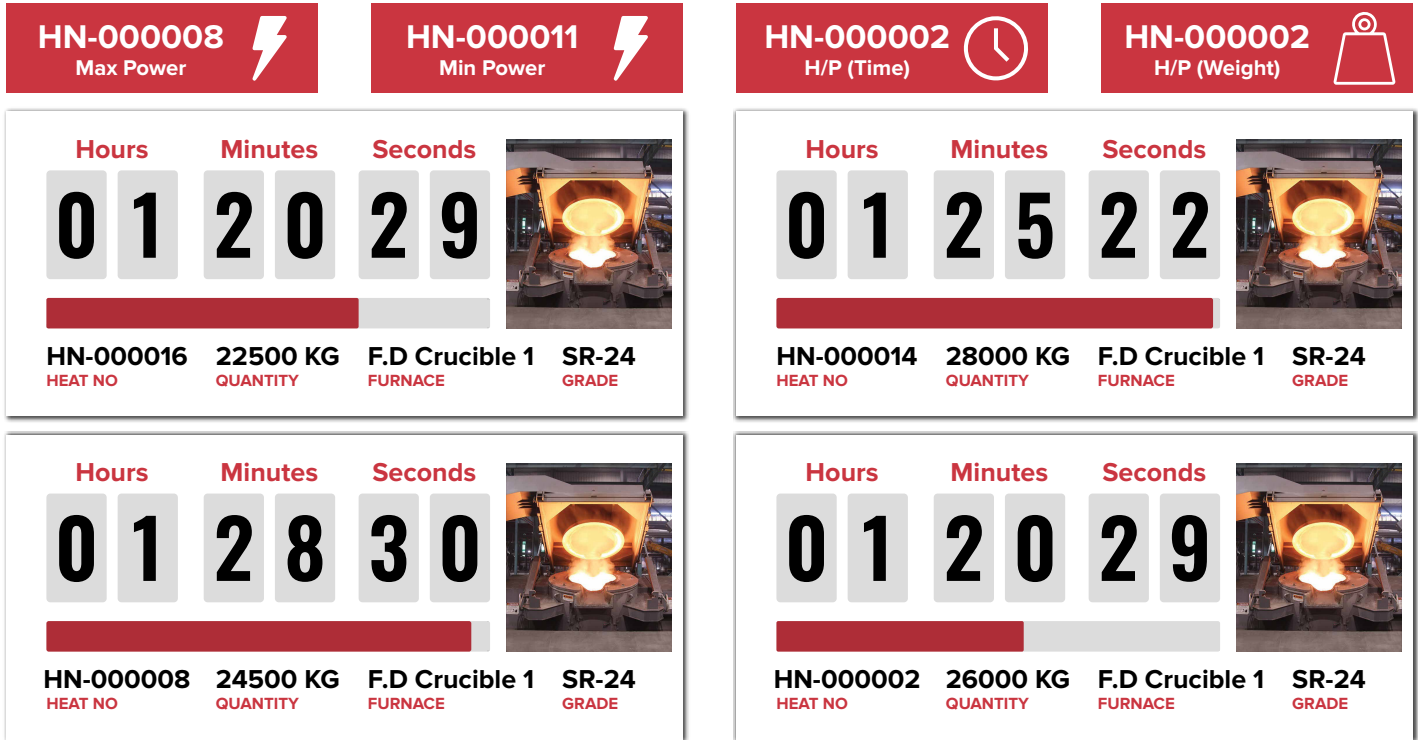
View trends and production history.

Smart Melt allows users to view their entire production history and trends with the touch of a button. View key information such as total units consumed, total production, longest production time and more.

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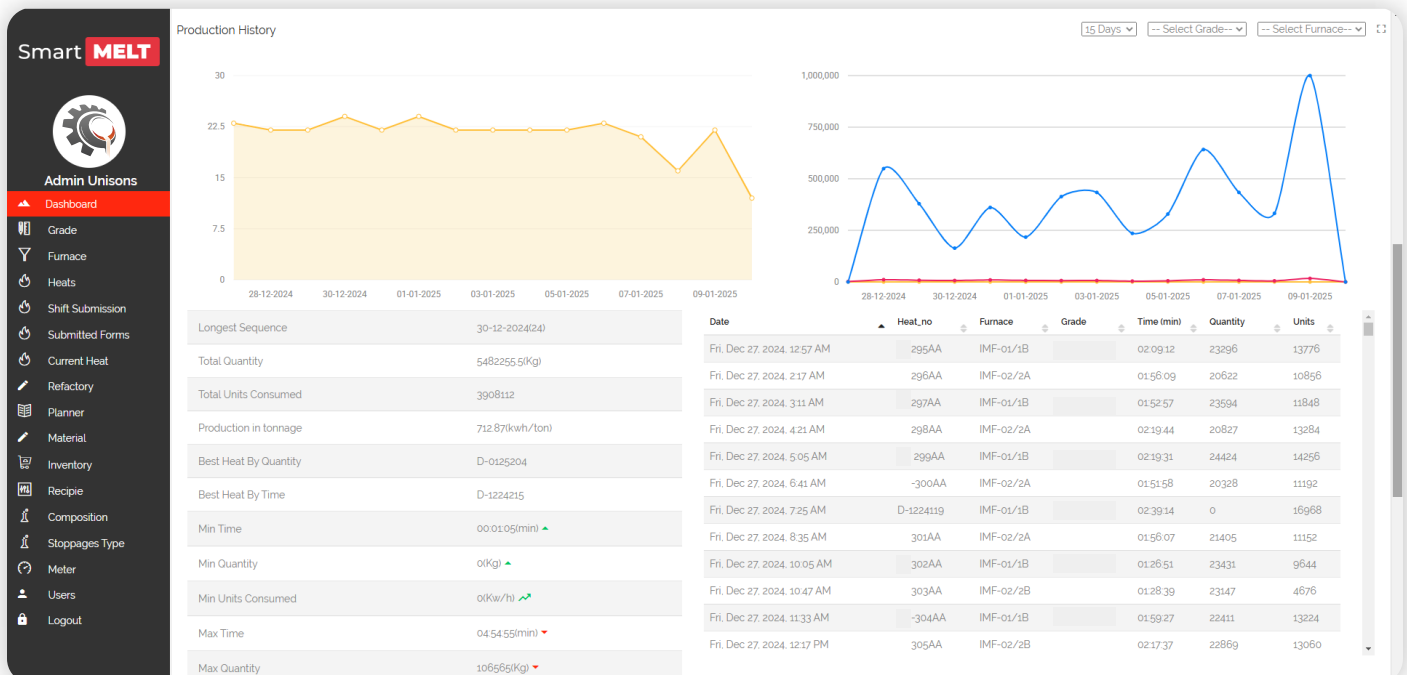
KEEP TRACK OF YOUR
FURNACE OPERATIONS.

HN-000008 ⚡ Max Power	HN-000011 ⚡ Min Power	HN-000002 🕐 H/P (Time)	HN-000002 ⚖ H/P (Weight)

Max Power

Hours	Minutes	Seconds
0 1	2 0	2 9

HN-000016 — **HEAT NO** | 22500 KG — **QUANTITY** | F.D Crucible 1 — **FURNACE** | SR-24 — **GRADE**

H/P (Time)

Hours	Minutes	Seconds
0 1	2 5	2 2

HN-000014 — **HEAT NO** | 28000 KG — **QUANTITY** | F.D Crucible 1 — **FURNACE** | SR-24 — **GRADE**

Hours	Minutes	Seconds
0 1	2 8	3 0

HN-000008 — **HEAT NO** | 24500 KG — **QUANTITY** | F.D Crucible 1 — **FURNACE** | SR-24 — **GRADE**

Hours	Minutes	Seconds
0 1	2 0	2 9

HN-000002 — **HEAT NO** | 26000 KG — **QUANTITY** | F.D Crucible 1 — **FURNACE** | SR-24 — **GRADE**

COMPATIBLE WITH ANDROID, iOS & ERP.

Android
Available for android phones.

iOS
Available for iOS phones.

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DIGITALIZE YOUR STEEL MAKING.
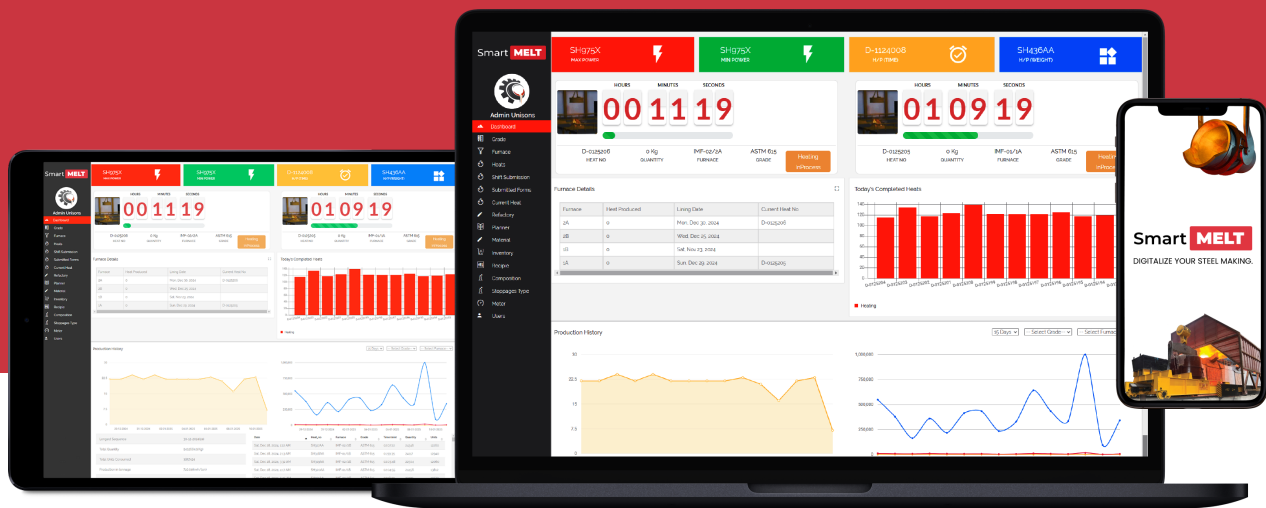
Precision. Efficiency. Automation.

Power Up Your Melt Shop with

Smart MELT

DIGITALIZE YOUR STEEL MAKING.

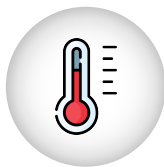- **Trends**
- **Alloy Consumption**
- **Chemical Composition**
- **Quality Control**
- **ERP Synchronisation**
- **Temperature Measurement**
- **Operation Time**
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