

TSK-ASSET HEALTH OVERVIEW

STEEL MELTING SHOP

 **Caster**



 **BOF**



 **SMLP**



 **HMDS**



TSK-ASSET HEALTH OVERVIEW

Continuous Casting Machine

HMDS	BOF	RH	CASOB	LF	CASTER
Ladle weight 200 Ton	Tundish weight 50 Ton	Cast Speed St#1 1.3 m/min	Cast Speed St#2 1.3 m/min	Mould Level St#1 75%	Mould level St#2 75%

SMS

Caster

Ladle Turret

Tundish Car 1

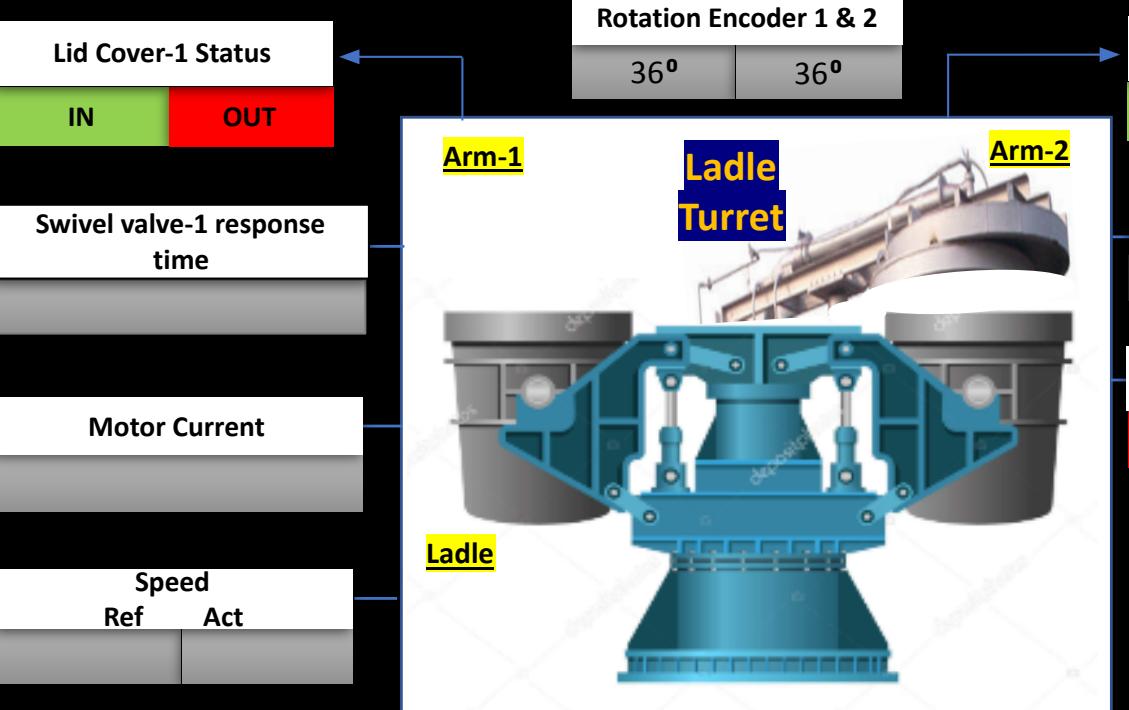
Tundish Car 2

Mould Strand 1

Mould Strand 2

Segment Strand 1

Segment Strand 2



Lid Cover-1 Status
IN OUT

Swivel valve-1 response time

Motor Current

Speed Ref Act

Rotation Encoder 1 & 2
36° 36°

Lid Cover-2 Status
IN OUT

Swivel valve-2 response time

Pneumatic brake supply valve
OPEN CLOSE

Amepa Ready

Drive Ready

Motor Brake OK

Safety Test Arm-1

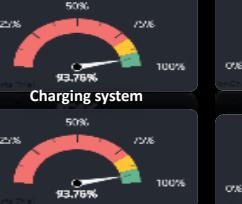
Safety Test Arm-2

SPM Sensor OK

Emerg. Pressure OK

Camera healthy

Equipment health 93.8%



Charging system



Valve system



Cooling system



Greasing system



Hydraulic system

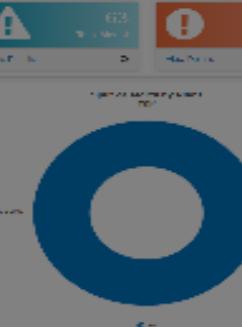


Steam heating system

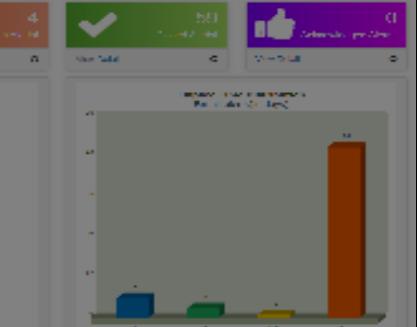
RECENT ALERTS

- High Tilting Drive Speed
- RV1 Operating Time Increasing
- Average oil temperature is high

ALERT CLOSURE COMPLIANCE



Alert Closure Compliance



SAP PM MO COMPLIANCE

Maint Order Comp

Category	Value
ZM01	65 %
ZM02	54 %
ZM03	80 %
ZM04	39 %
ZM05	60 %
ZM06	72 %
ZM08	79 %
ZM09	89 %

Lid Cover-1 Status
IN OUT

Swivel valve-1 response time

Motor Current

Speed Ref Act

Rotation Encoder 1 & 2
36° 36°

Lid Cover-2 Status
IN OUT

Swivel valve-2 response time

Pneumatic brake supply valve
OPEN CLOSE

Amepa Ready

Drive Ready

Motor Brake OK

Safety Test Arm-1

Safety Test Arm-2

SPM Sensor OK

Emerg. Pressure OK

Camera healthy

Parameters	Status	Setpoint	Feedback
Arm-1 lift Valve	OK		
Arm-2 lift Valve	OK		
Lid cover-1 UP/Down Valve	OK		
Lid cover-2 UP/Down Valve	OK		
Locking valve Open	OK		
Locking valve Close	OK		
Slide gate Valve	OK		

Trends 

Alarms 

Tasks 

Models 

Ladle Turret

Sl. No	Parameter	Tag ID	Unit/ Remark
1	Ladle Weight	40021,40022	Ton
2	Tundish Weight	40060	Ton
3	Cast Speed Strand 1	40048	m/m
4	Cast Speed Strand 2	40052	m/m
5	Mould Level Strand 1	41058	
6	Mould Level Strand 2	41106	
7	Lid Cover-1 Status	40185,40186	NA
8	Rotation Encoder 1 & 2	40020	NA
9	Lid Cover-2 Status	40188,40189	NA
10	Swivel valve-1 response time	40027	NA
11	Swivel valve-2 response time	40028	NA
12	Motor Current	40018	NA
13	Pneumatic brake supply valve	Not in L1	
14	Speed	40017	NA
15	Amepa Ready	Not Configured in DAMS	
16	Drive Ready	40168	NA
17	Motor Brake OK	40173	NA
18	Safety Test Arm-1	40196,40197	NA

Sl. No	Parameter	Tag ID	Unit/ Remark
19	Safety Test Arm-2	40198,40199	NA
20	SPM Sensor OK	Not in L1	
21	Emerg. Pressure OK	Not in L1	
22	Camera healthy	Not in L1	
23	Arm-1 lift Valve	40023,40024	NA
24	Arm-2 lift Valve	40025,40026	NA
25	Lid cover-1 UP/Down Valve	Not in L1	
26	Lid cover-2 UP/Down Valve	Not in L1	
27	Locking valve Open	40176	NA
28	Locking valve Close	40177	NA
29	Slide gate Valve	40194,40195	NA
30			
31			
32			
33			
34			
35			
36			

- Not in L1: IBA Tags not available/not provided by L1
- Not Configured in DAMS: Tag wasn't provided in data dictionary for configuration

TSK-ASSET HEALTH OVERVIEW

Continuous Casting Machine

HMDS	BOF	RH	CASOB	LF	CASTER
Ladle weight 200 Ton	Tundish weight 50 Ton	Cast Speed St#1 1.3 m/min	Cast Speed St#2 1.3 m/min	Mould Level St#1 75%	Mould level St#2 75%

SMS

Caster

Ladle Turret

Tundish Car 1

Tundish Car 2

Mould Strand 1

Mould Strand 2

Segment Strand 1

Segment Strand 2

Tundish Car

Speed
Ref Act

Drive #1 Current

Casting Position

Cyl 1 Cyl 2 position difference
0.6 A

Servo Valve Response Time
0.6 A

Speed
Ref Act

Drive #2 Current
0.6 A

Flying Duration
0.6 A

Drive#1 OK

Drive #2 OK

Motor #1 RTD

Motor #2 RTD

Zeroing OK

Sen Variation ON

Compound Cast ON

Hydraulic OK

Equipment health 93.8%

RECENT ALERTS

- High Tilting Drive Speed
- RV1 Operating Time Increasing
- Average oil temperature is high

ALERT CLOSURE COMPLIANCE

Total Alerts	Open Alerts	Closed Alerts	Acknowledged Alerts
63	4	59	0

SAP PM MO COMPLIANCE

Trends

Alarms

Tasks

Models

Parameters	Status	Value
Rod End PT		
Piston End PT		

Parameters	Command	Feedback
Shroud Fixing		
Lancing		

Tundish Car 1

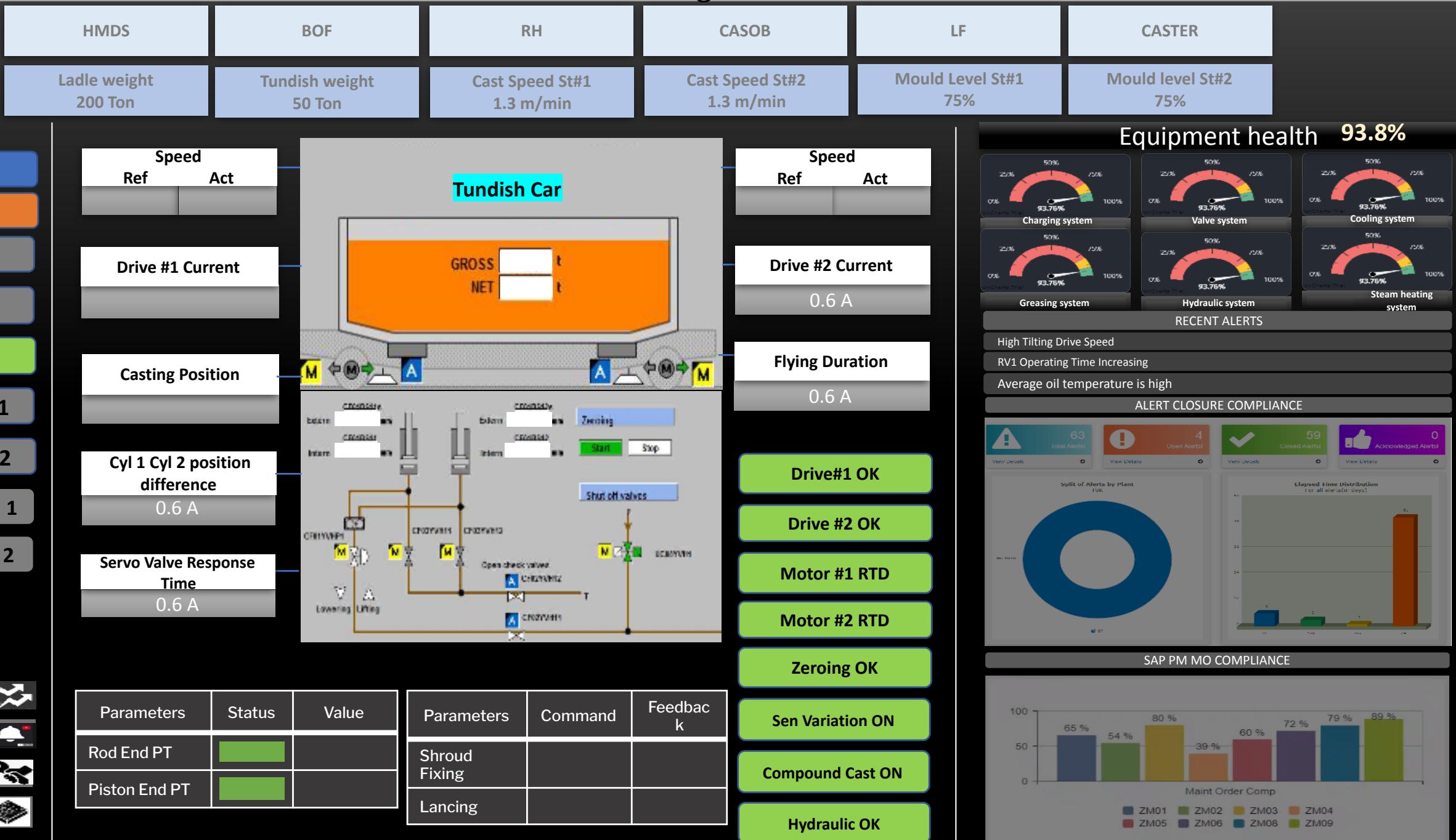
Sl. No	Parameter	Tag ID	Unit/ Remark
1	Motor 1 Speed Ref. & Act	40047,40048	NA
2	Motor 2 Speed Ref. & Act	40051,40052	NA
3	Drive #1 Current	40049	NA
4	Drive #2 Current	40053	NA
5	Casting Position	Not Configured in DAMS	
6	Flying Duration	Not Configured in DAMS	
7	Cyl 1 Cyl 2 position difference	40055,40057	NA
8	Servo Valve Response Time	40059	NA
9	Drive#1 OK	40202	NA
10	Drive#2 OK	40204	NA
11	Motor #1 RTD	Not in L1	
12	Motor #2 RTD	Not in L1	
13	Zeroing OK	Not in L1	
14	Sen Variation ON	Not in L1	
15	Compound Cast ON	Not Configured in DAMS	
16	Hydraulic OK	Not Configured in DAMS	
17	Rod End PT	40030	NA
18	Piston End PT	40029	NA

Sl. No	Parameter	Tag ID	Unit/ Remark
19	Shroud Fixing	40190	NA
20	Lancing	40191	NA
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			

- Not in L1: IBA Tags not available/not provided by L1
- Not Configured in DAMS: Tag wasn't provided in data dictionary for configuration

TSK-ASSET HEALTH OVERVIEW

Continuous Casting Machine



Tundish Car 2

Sl. No	Parameter	Tag ID	Unit/ Remark
1	Motor 1 Speed Ref. & Act	40063,40064	NA
2	Motor 2 Speed Ref. & Act	40067,40068	NA
3	Drive #1 Current	40065	NA
4	Drive #2 Current	40069	NA
5	Casting Position	Not Configured in DAMS	
6	Flying Duration	Not Configured in DAMS	
7	Cyl 1 Cyl 2 position difference	40071,40072	NA
8	Servo Valve Response Time	40074	NA
9	Drive#1 OK	40216	NA
10	Drive#2 OK	40218	NA
11	Motor #1 RTD	Not in L1	
12	Motor #2 RTD	Not in L1	
13	Zeroing OK	Not in L1	
14	Sen Variation ON	Not in L1	
15	Compound Cast ON	Not Configured in DAMS	
16	Hydraulic OK	Not Configured in DAMS	
17	Rod End PT	40031	NA
18	Piston End PT	40032	NA

Sl. No	Parameter	Tag ID	Unit/ Remark
19	Shroud Fixing	40192	NA
20	Lancing	40193	NA
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			

- Not in L1: IBA Tags not available/not provided by L1
- Not Configured in DAMS: Tag wasn't provided in data dictionary for configuration

TSK-ASSET HEALTH OVERVIEW

Continuous Casting Machine

HMDS	BOF	RH	CASOB	LF	CASTER
Ladle weight 200 Ton	Tundish weight 50 Ton	Cast Speed St#1 1.3 m/min	Cast Speed St#2 1.3 m/min	Mould Level St#1 75%	Mould level St#2 75%

SMS

Caster

Ladle Turret

Tundish Car 1

Tundish Car 2

Mould Strand 1

Mould Strand 2

Segment Strand 1

Segment Strand 2

Trends

Alarms

Tasks

Models

AMLC System

Mould Level
Ref
Act

Stopper Position
Ref
Act

Servo Valve
Ref
Act

Stopper Rod Zeroing
value
75%

Level Sensor OK

MLC Auto mode

Service mode

Berthold Unit Ready

Motion Controller Ready

RAM System

Current
Top Right
Btm right

Current
Top Left
Btm Left

Spindle Position Top
Left
Right

Spindle Position Btm
Left
Right

RAM Calibrated

Cooling System OK

Drive Ready

Clamping/ Relief/ Open

Rammimg in Progress

Mould Level Control

Remote adjustable Mould

Parameters	Value
Mould Taper Left	
Mould Taper Right	
TOC Left	
TOC Right	
Asymmetry	

Equipment health

93.8%

Charging system

Valve system

Cooling system

Greasing system

Hydraulic system

Steam heating system

High Tilting Drive Speed

RV1 Operating Time Increasing

Average oil temperature is high

ALERT CLOSURE COMPLIANCE

View Details	63 Total Alerts	View Details
Open Alerts	4	View Details
Closed Alerts	59	View Details
Acknowledged Alerts	0	View Details

Split of Alerts by Plant TSK

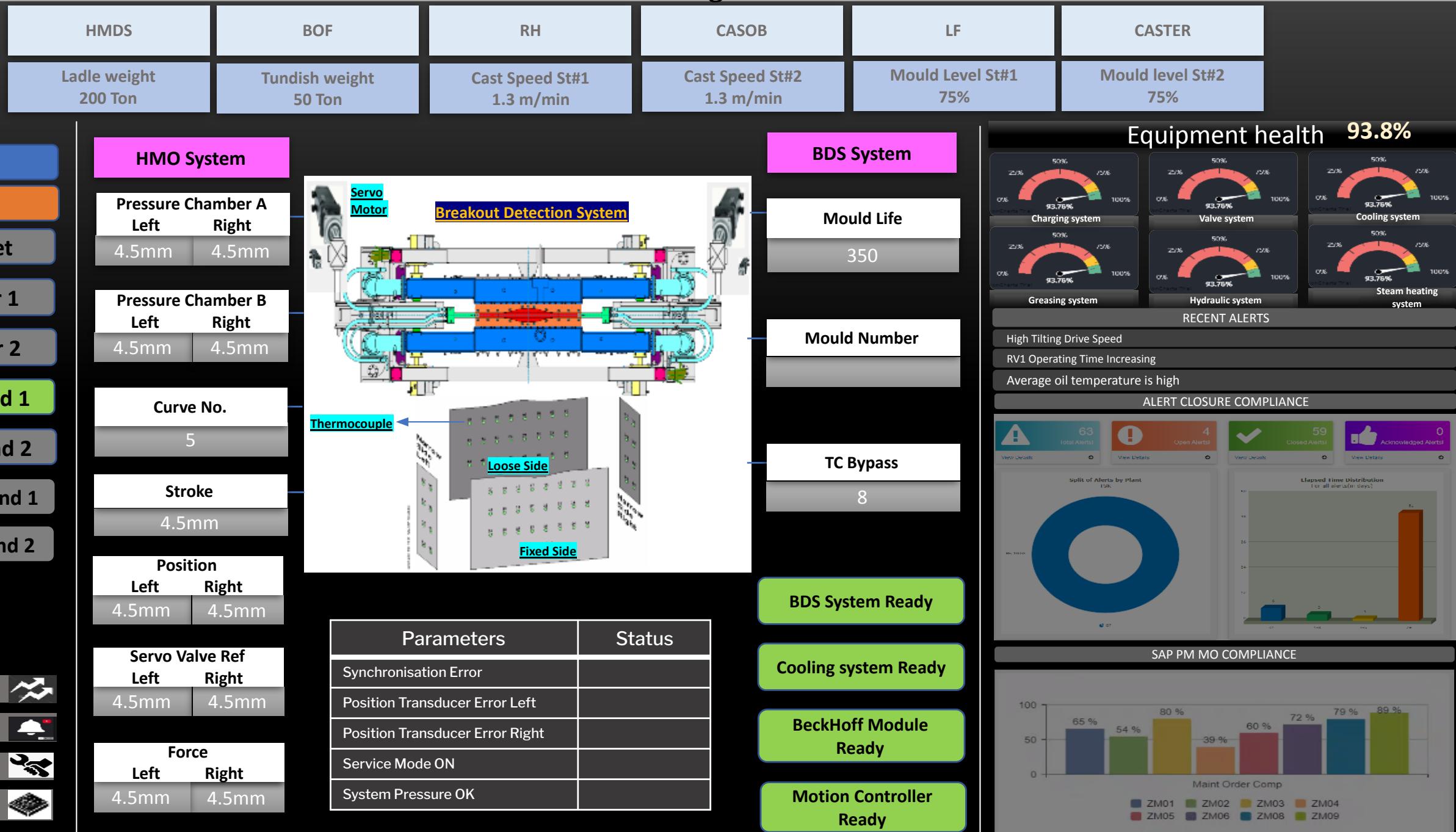
Elapsed time Distribution (For all duration bins)

SAP PM MO COMPLIANCE

ZM01	65 %	ZM02	54 %	ZM03	80 %	ZM04	39 %	ZM05	60 %	ZM06	72 %	ZM07	79 %	ZM08	89 %	ZM09
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

TSK-ASSET HEALTH OVERVIEW

Continuous Casting Machine



TSK-ASSET HEALTH OVERVIEW

Continuous Casting Machine



TSK-ASSET HEALTH OVERVIEW

Continuous Casting Machine

HMDS	BOF	RH	CASOB	LF	CASTER
Ladle weight 200 Ton	Tundish weight 50 Ton	Cast Speed St#1 1.3 m/min	Cast Speed St#2 1.3 m/min	Mould Level St#1 75%	Mould level St#2 75%

SMS

Caster

Ladle Turret

Tundish Car 1

Tundish Car 2

Mould Strand 1

Mould Strand 2

Segment Strand 1

Segment Strand 2

HMO System

Pressure Chamber A	BDS System	
Left	Right	Mould Life
4.5mm	4.5mm	350

Pressure Chamber B

Left	Right	Mould Number
4.5mm	4.5mm	59

Curve No.

5	TC Bypass
Thermocouple	8

Stroke

4.5mm	BDS System Ready
-------	-------------------------

Position

Left	Right	Cooling system Ready
4.5mm	4.5mm	Beckhoff Module Ready

Servo Valve Ref

Left	Right	Motion Controller Ready
4.5mm	4.5mm	39 %

Force

Left	Right	65 %
4.5mm	4.5mm	54 %

System Pressure OK

60 %	72 %	80 %	79 %	89 %
ZM01	ZM02	ZM03	ZM04	ZM05
ZM06	ZM07	ZM08	ZM09	ZM01

Parameters

Synchronisation Error	Status
Position Transducer Error Left	OK
Position Transducer Error Right	OK
Service Mode ON	OK
System Pressure OK	OK

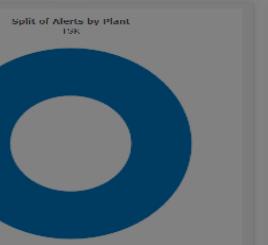
RECENT ALERTS

- High Tilting Drive Speed
- RV1 Operating Time Increasing
- Average oil temperature is high

ALERT CLOSURE COMPLIANCE

Total Alerts: 63	Open Alerts: 4	Closed Alerts: 59	Acknowledged Alerts: 0
View Details	View Details	View Details	View Details

Split of Alerts by Plant: 15k



Elapsed Time Distribution (for all alerts in days)

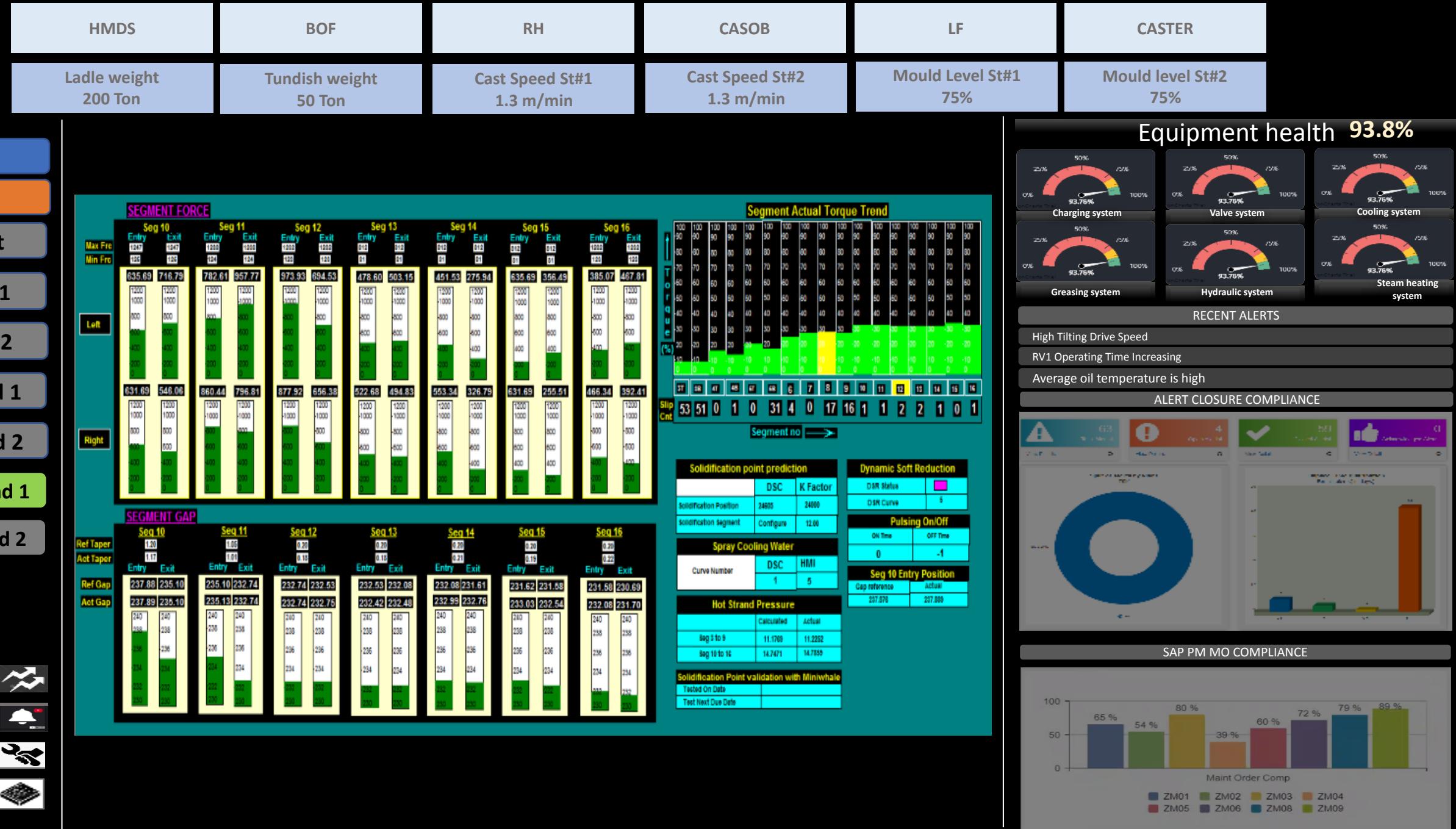


SAP PM MO COMPLIANCE

Main Order Comp	65 %	54 %	80 %	60 %	72 %	79 %	89 %
ZM01	ZM02	ZM03	ZM04	ZM05	ZM06	ZM07	ZM08
ZM09	ZM01	ZM02	ZM03	ZM04	ZM05	ZM06	ZM07

TSK-ASSET HEALTH OVERVIEW

Continuous Casting Machine



TSK-ASSET HEALTH OVERVIEW

Continuous Casting Machine

