

Darlipali



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Alarm Management & Optimisation

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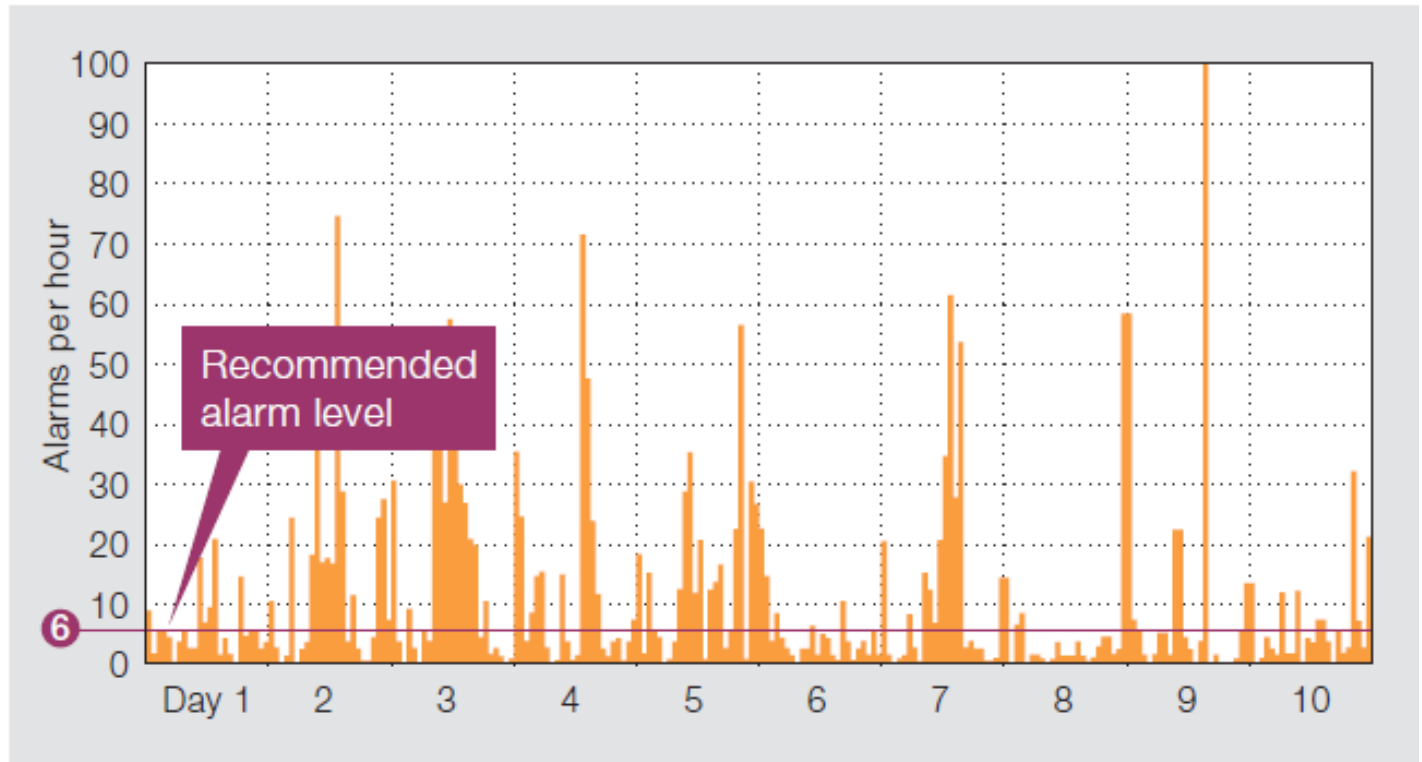
AGENDA



Control room operators are often faced with an overwhelming number of alarms, courtesy of modern control systems



Frequently, the actual number of alarms per hour is far greater than the EEMUA recommend alarm rate of 6 per hour

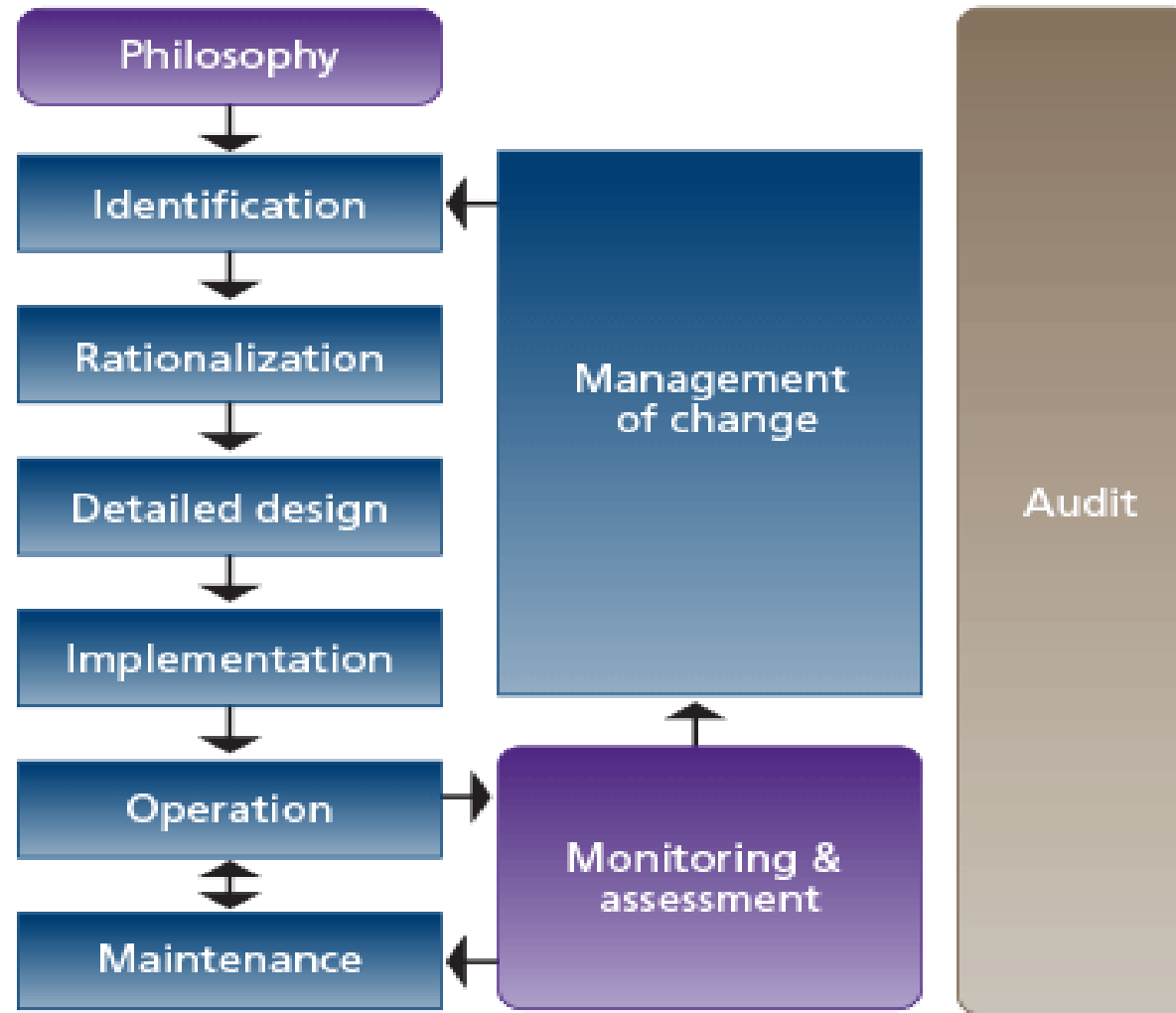


Indicators of Poor Alarm System Performance

- • Major unit upsets, such as losing a draught group, generate an unmanageable number of alarms.
- • Minor operating upsets, as well as seemingly routine operations, such as putting a mill in service, generate a significant number of alarms.
- • Some active alarms, such as low primary air flow rate on a standby mill, do not require operator attention.
- • Some alarms remain active for significant periods of time.
- • When some alarms activate, such as 22 kilovolt (kV) breaker open, the operator is not sure of what to do about them.
- • When nothing is wrong active alarms occur, such as unit at maximum load.
- • Some alarms are not as critical as their priority might suggest



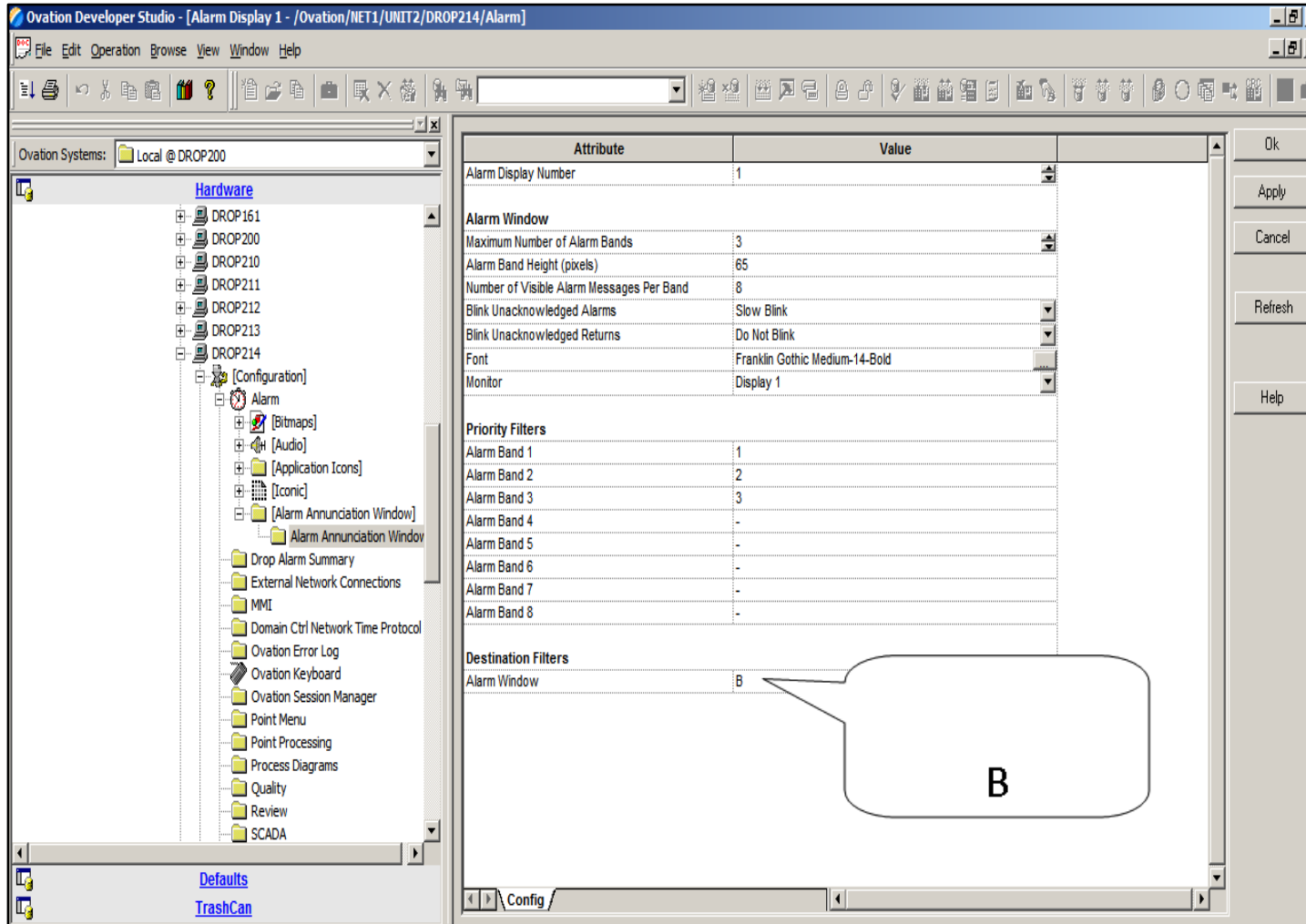
Steps for Addressing Alarm Problems



Using the above methodology in unit#2 ovation system alarm management & optimisation has been implemented in ovation DCS successfully. Total 4914 alarms are rationalised in consultation with operation department



Configuration Changes done in LVS workstations



Attribute	Value
Alarm Display Number	1
Alarm Window	
Maximum Number of Alarm Bands	3
Alarm Band Height (pixels)	65
Number of Visible Alarm Messages Per Band	8
Blink Unacknowledged Alarms	Slow Blink
Blink Unacknowledged Returns	Do Not Blink
Font	Franklin Gothic Medium-14-Bold
Monitor	Display 1
Priority Filters	
Alarm Band 1	1
Alarm Band 2	2
Alarm Band 3	3
Alarm Band 4	-
Alarm Band 5	-
Alarm Band 6	-
Alarm Band 7	-
Alarm Band 8	-
Destination Filters	
Alarm Window	B



Configuration Changes done in Tag information

Digital Operations | Ovation Point Information - 20BFD10CE421_XQ01.UNIT2@NET1

Home View Value / Mode Alarm

Point Name: 20BFD10CE421_XQ01.UNIT2@NET1

Select Point

Current Point: 20BFD10CE421_XQ01.UNIT2@NET1 | 220 V DCDB EARTH FAULT

Point Configuration Security Value Status Mode Hardware Alarm Display Module Information Ancillary

Parameter	Field	Value
Tagout		ENABLED
Status Checking	AR	1
Alarm Status		ALARM
Alarm Acknowledged Status		ACKNOWLEDGED
Alarm Sequence Number	AZ	19772
Alarm Times		
Time of First Alarm (sec)	U4	1/8/2024 9:08 AM
Time of First Alarm (nanosec)	U5	74272506
Time of Last Event (sec)	U6	1/8/2024 9:41
Time of Last Event (nanosec)	U7	7427064
Configurations		
Initial Alarm Delay Time (sec)	IT	
Alarm Return Delay Time (sec)	MP	0
Alarm Cutout	CK	00000000H
Destination	AY	E
Alarm Cutout Delay	CY	0
Status Copy	SK	00
Alarm Priorities		
Alarm Priority	AP	03H
Alarm Annunciation		
Alarm Annunciation Text	AT	220V DCDB-A EARTH FAULT
Alarm Description		
Alarm Description	AD	220 V DCDB EARTH FAULT

0-Alarm on zero
1-Alarm on One
2-Alarm on transition

ALARM ANNUNCIATION TEXT

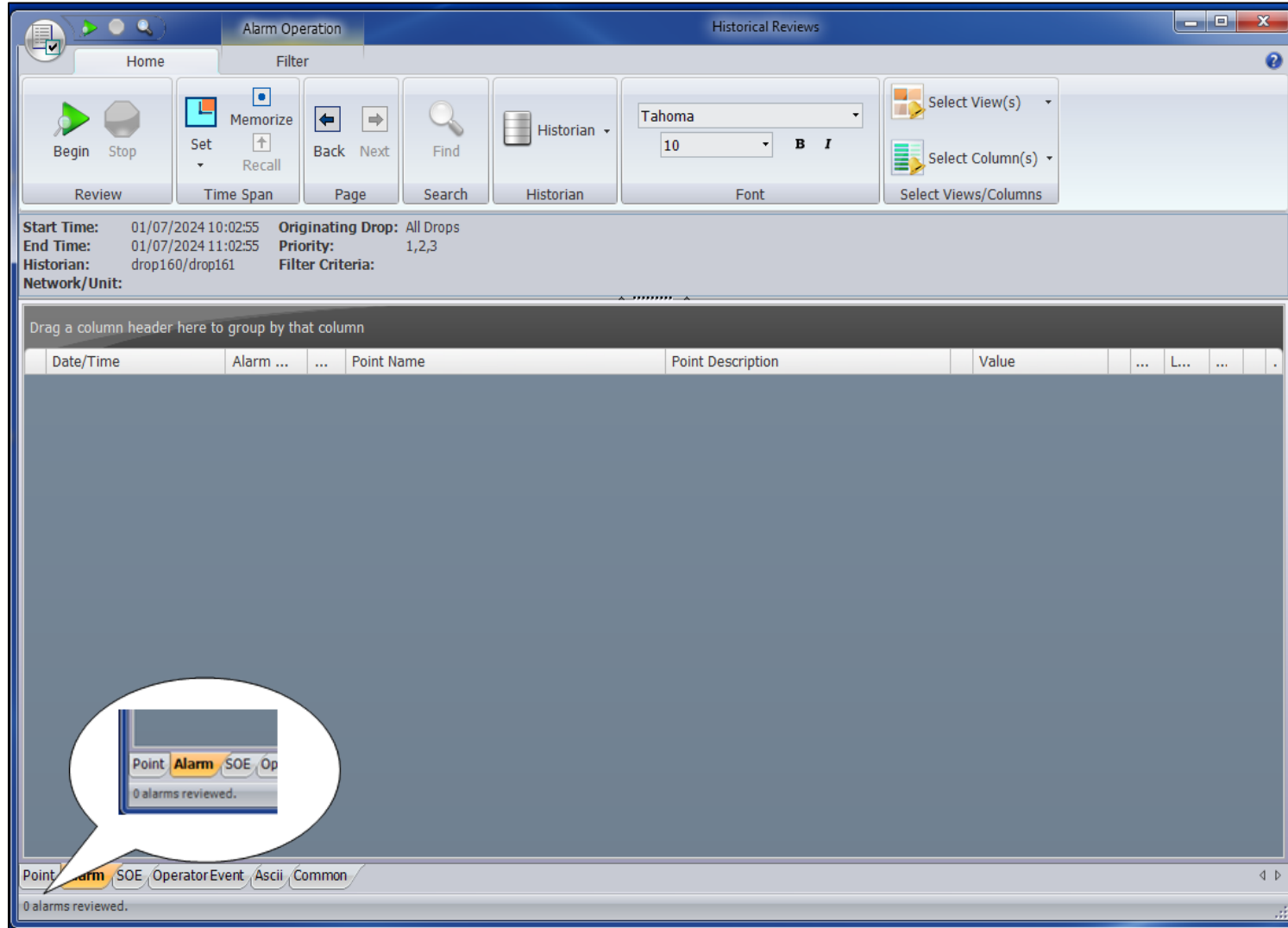
ALARM DESCRIPTION

- B-Boiler&Aux
- T-Turbine & Aux
- E-Electrical & Aux
- D-DCS related.
- C-CW&CT

PRIORITY-1 -For LVS TOP BAND (1st Band)
PRIORITY-2 -For LVS MIDDLE BAND (2nd Band)
PRIORITY-3 -For LVS BOTTOM BAND (3rd Band)
PRIORITY-4-8 -For Appear in alarm list. (Not in LVS THREE BANDS)



alarms per hour After modification in unit#2



Alarm Operation Historical Reviews

Home Filter

Begin Stop Review Time Span Page Search Historian

Memorize Set Recall Back Next Find Historian Tahoma 10 B I Select View(s) Select Column(s) Select Views/Columns

Start Time: 01/07/2024 10:02:55 Originating Drop: All Drops
End Time: 01/07/2024 11:02:55 Priority: 1,2,3
Historian: drop160/drop161 Filter Criteria:
Network/Unit:

Drag a column header here to group by that column

Date/Time	Alarm ...	Point Name	Point Description	Value	...	L...
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Point Alarm SOE Operator Event Ascii Common

0 alarms reviewed.



“PRODUCTIVITY IS NEVER AN ACCIDENT.
IT IS ALWAYS THE RESULT OF A
COMMITMENT TO EXCELLENCE, INTELLIGENT
PLANNING, AND FOCUSED EFFORT.”
PAUL J. MEYER

ONE STEP
For betterment





Thank You



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