



Success Story - AIMS

Success Story

Sharjah Electricity and Water Authority (Al Layyah Power Plant) - Sharjah – UAE

Goals

- Monitor the health and performance of critical alarm tags of Unit#5, Unit#6, Unit#7 and Unit#8.
- Centralize alarms view and reporting facility for different make of DCS.
- Reduction of alarms generation at Al-Layyah power plant to achieve plant up-time
- To achieve alarms rationalization as per EEMUA 191 and ANSI/ISA-18.2-2009.
- To identify root cause of any plant up-set condition. Easy analysis of sequence of events at single place.

Challenges

- Approximately 5000+ alarms are produced daily by Unit#5, Unit#6, Unit#7 and Unit#8 DCS but there is no tool to authenticate and prioritize the alarms for better operation.
- Unable to determine the root cause of abnormal conditions in plants due to the lack of analytical tools.
- Due to the absence of centralized control for all Unit's Alarms record, operators struggled to provide timely response and identify any first out occurrences.
- No alarm deviation detection device to implement the EEMUA or ANSI / ISA 18.2 global standards (As per the standards, alarm counts should be less than 144)

Solutions

- X-Force AIMS to capture alarms and events from Emerson and Yokogawa DCS Source to centralized station.
- Each Alarm Analysis Client Machine installed with a Viewer and Analysis tool to capture and consolidate data from unit 5/6 and unit 7/8 plant sites to get the exact count of alarms (per hour/per day/per shift).
- Advanced Reporting tool and KPI Dashboard for accurate visualization of alarm rate with weekly/monthly reports to demonstrate the root cause of every alarm.
- X-Force AIMS compliance with EEMUA 191 or ANSI/ISA – 18 global standards.



Industry: Power and Utilities

Products: X-Force Alarm & Information Management System

Outcomes:

Minimized time, effort and risk by identifying the actual generations of alarms and taking immediate corrective action. Achieved the alarm rationalization within short duration of installation.

After the installation of X-Force AIMS, continuous improvement to comply with international standards became simple and quick.

Operators are now focused on most critical alarms instead of unimportant or less priority alarms which in turn enabled the Al Layyah to improve the plant's overall productivity.

AL Layyah Sites	Assumptions	Actual	After Correction
Unit 5	200- 250	195	< 144 (Standard)
Unit 6	700- 900	560- 650	< 180- 190
Unit 7	1500	1000	< 650
Unit 8	2000	1300	< 450 - 550



Success Story

VTTI Fujairah Terminal Limited

Challenges

- Unable to recognize any of the day's top bad actors in the history records of alarms in day-to-day operations.
- All alarms and events comes in burst condition and unable to identify area wise/ unit wise/ Operator wise or section wise.
- It was difficult to check alarm rates and plant output due to the restricted alarm display and storage facilities of the ABB Freelance DCS.
- In the CCR plant, in terms of alarm generation and handling technique, unable to identify weather plants is satisfactory running.
- No alarm deviation detection device to implement the EEMUA or ANSI / ISA 18.2 global standards and achieve alarm rationalization activity.
- Unable to identify the root cause of abnormal plant conditions due to the absence of analytical tools.
- Operators struggles to provide timely response and recognize any first-out incidents due to the absence of Alarm monitoring system.

Solutions

- X-Force AIMS are implemented at the CPP facility at the VTTI FTL site to monitor alarms near the operator panel for day-to-day operation.
- In X-Force AIMS, customised reports has been configured to get area-wise, section-wise and priority-wise alarm distribution and counts.
- Two alarm channels have been configured for Terminal-1 and Terminal-2 from ABB Freelance DCS station.
- X-Force AIMS to collect all Alarms and events from CCR ABB Freelance DCS station and Implemented Frequent Alarm, Chatter Alarm, Standing Alarm, KPI Alarms and many more customized reports.
- Implemented advanced Reporting tool and KPI Dashboard for accurate visualization of alarm rate with weekly/monthly reports to demonstrate the root cause of every alarm.
- X-Force AIMS complies with EEMUA 191 or ANSI/ISA – 18 global standards.
- Priority wise/ section wise report segregation in reports could get possible and Operator is now focused on respective area alarms activity.



Industry: Oil & Gas – Refinery

Products: X-Force Alarm Information Management System (AIMS)

Outcomes:

- Reduced time, effort and risk by identifying and taking immediate corrective action on the actual generations of alarms.
- Achieved the alarm rationalization within short duration of installation.
- After the installation of X-Force AIMS, continuous progress in complying with international standards is easy and fast.
- Instead of less priority alarms, operators are now focused on most critical alarms, which in turn helped VTTI to increase the overall productivity of all the plants at each refinery site.



Indian Oil Corporation Limited

Challenges

- More than 10 plants operate at each IOCL Refinery site.
- Unable to decide which site and which plant performs satisfactorily in terms of alarm generation and handling methodology in day-to-day operations.
- Many plants generate approximately more than 15000 alarms daily, but there is no tool to authenticate and priorities the alarms for better operation.
- Unable to identify the root cause of abnormal plant conditions due to the absence of analytical tools.
- Operators struggles to provide timely response and recognize any first-out incidents due to the lack of centralized control over all Unit Alarms records.
- No alarm deviation detection device to implement the EEMUA or ANSI / ISA 18.2 global standards and achieve alarm rationalization activity.

Solutions

- Implemented X-Force AIMS Plant-wise and Central Enterprise AIMS Software to monitor the health status of individual Plant and the central view of the entire refinery.
- X-Force AIMS (Plant-wise) capture alarms and events at each Plant from various DCS and PLC/ SOE stations. Installed with modules for Plant wise analysis, viewer, real time alarms monitoring, Excel schedule reports configured for day-to-day operations and Plant’s personnel analysis.
- X-Force AIMS Enterprise to collect all plant’s Alarms and events at central location. Implemented central KPI Alarms dashboard, to consolidate alarms data in tabular form with SMS & Email notification functionality and excel reports summary.
- Advanced Reporting tool and KPI Dashboard for accurate visualization of alarm rate with weekly/monthly reports to demonstrate the root cause of every alarm.
- X-Force AIMS complies with EEMUA 191 or ANSI/ISA – 18 global standards.
- Plant wise AIMS helps to rationalize alarms Per Operator/ area wise/ section wise. & Central enterprise AIMS helps to get consolidated alarm rationalization view of the site.
- It could get possible to notify personnel by SMS or Instant email on occurrence of critical PSPI or excursion or concerned tags.

Alarm Generation	Avg. 12-15,000 alarms per plant
Installed Enterprise X-Force AIMS	5
Plant-wise X-Force AIMS	55



Industry: Oil & Gas – Refinery

Products: X-Force Alarm Information Management System (AIMS) – Plant wise AIMS & Central AIMS Enterprise System.

Outcomes:

- Reduced time, effort and risk by identifying and taking immediate corrective action on the actual generations of alarms.
- Achieved the alarm rationalization within short duration of installation. Overall Alarms generate flow was around 15k and more in each plant. By using X-Force AIMS, it got easy to monitor, identify, implement and achieve alarms generates as per EEMUA 191 Guidelines.
- After the installation of X-Force AIMS, continuous progress in complying with international standards is easy and fast.
- Instead of less priority alarms, operators are now focused on most critical alarms, which in turn helped IOCL to increase the overall productivity of all the plants at each refinery site.



Success Story

SRF Ltd. - Dahej



Goals

- Monitor the Individual Plant's health and performance of critical alarms and events for their plants.
- Reduction of alarms generation to achieve plant up-time at SRF Ltd. – Dahej.
- Achieve alarms rationalization as per EEMUA 191 and ANSI/ISA–18.2–2009 Standards.

Challenges

- Facing problems of poor alarm configuration in DCS.
- Huge Number of alarms per day for a single plant.
- Operator facing problems of plant alarms & hard to identify critical alarms.
- Challenging to act on this much large amount of alarm.

Solutions

- X-Force for Dedicated Plant Control System.
- Monitoring of Critical Alarm through X-Force AIMS Instead of DCS.
- Visual notification using Critical Alarm Display & Audible notification in Control room for Critical alarm.
- X-Force AIMS Reports & Analysis to achieve Alarms as per Global Standards and Plant Safety.



Industry : Chemicals

Products:

X Force Alarm Information Management System (AIMS)

Outcomes :

1. Increase operator efficiency by providing situation awareness of plant.
2. Reduced time, effort and risk by identifying and taking immediate corrective action on the actual generations of alarms.
3. Easy data availability for Alarm Rationalization process for Instrument / Process / Maintenance Team.
4. Drastically decrease in Alarm Counts after Counters after alarm rationalization / configuration in control system.



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