



**General Electric LM 6,000**

**Chemical Cleaning of HRSG No: 5 & No: 6**

**System Decontamination Project Report**

**March 2011**

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## **INTRODUCTION**

Industrial Action Services (IAS) was contacted by a large general contractor to perform a chemical cleaning and system decontamination process for one of their customer's new commissioning project on two LM 6,000 gas turbine generator HRSG systems. The objective was to decontaminate the HRSG system per the customer, OEM, and industry standards.

### **The Key Benefits of this project resulting from the High Velocity Hot Oil Flush and Chemical Flush:**

- Reliable Unit Start Up
- Ensured system cleanliness
- Minimize future maintenance / repair costs

## **PRIMARY OBJECTIVES**

- Safely and efficiently perform the chemical cleaning service in a professional manner
- Ensure that each piece of equipment is prepared for commissioning in the expected timeframe and according to the customers, OEM, and industry standards.
- Provide documentation of results confirming successful project completion.

## **OVERALL SCOPE**

- Unload and set-up chemical cleaning equipment
- Make chemical cleaning equipment connections
- Perform and monitor chemical cleaning procedures and sequences
- Disconnect all chemical cleaning equipment, hoses, and fittings
- Load chemical cleaning equipment and depart from job site

## **PROJECT SAFETY**

IAS prides itself on working safely on each and every project. On this project IAS worked a total of **3,133.50 hours** without any safety incidents, near misses or accidents.

### EQUIPMENT SET UP – CHEMICAL FLUSH



Non hazardous flushing chemicals were approved for use by the customer's EH&S department. The HRSG system along with the associated piping was chemically cleaned and filtered during the process.

The process for chemical cleaning included;

1. Inhibit
2. Chelation
3. Neutralization
4. Passivate



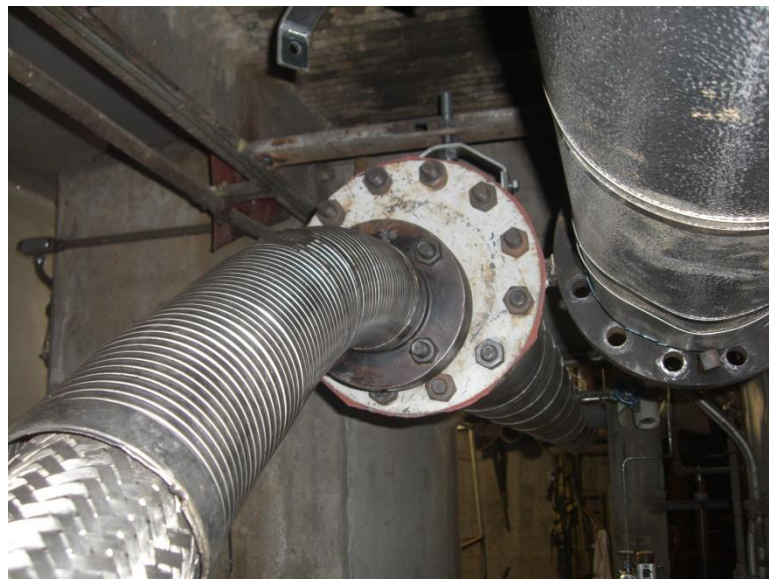
Internal of the HRSG return line before chemical cleaning



Internal of the HRSG return line after chemical cleaning



IAS bypasses the condenser (Supply line to Condenser)



IAS bypasses the condenser (Return line from the Condenser)





IAS decontaminates the HRSG's during the chemical cleaning process



IAS proving coupon supplied by contractor before chemical clean



IAS proving coupon after chemical clean



## CONCLUSION

The project was completed to the specifications approved by our customer and General Electric. All inorganic debris and wear metal were successfully removed on General Electric's HRSG Systems.

Respectfully Submitted by  
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Industrial Action Services, Corp - IAS