



Nex Generation Consulting

Providing Specialized Products and Services



Condensate Storage Tanks (CST)

Underwater Robotic Inspection and Cleaning Services

- ✓ *On-line Video Inspection Services (Inside Tank)*
- ✓ *On-line Robotic Cleaning Services (Tank Floors)*
- ✓ *On-line Ultra-Sonic Thickness (U/T) Inspections (Tank Floors)*

CST Applications:

Nuclear Power Plants

Fossil Fuel Power Generation Plants

Petroleum and Chemical Plants

Manufacturing



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All of our services are performed with Remote Operated Vehicles (ROV) while your tanks remain full (no draining required).

ITEM One: ROV Video Inspection Services

For these services, we will use our ROV Inspection Submarine (see illustration below) to video the inside of the CST. This inspection service will visually review the internal condition your tanks and will determine if there is any accumulation of sedimentation, debris or algae on your tank floors. All of our visual inspection services are recorded for your records and further engineering review.



ROV Inspection Submarine



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ITEM TWO: Robotic Cleaning Services

For these services, we will use our model CST-600 Robotic Cleaning Unit (see illustration below) to extract and clean any sedimentation, debris or algae that have accumulated on your tank floors. Our Cleaning ROV is equipped with an underwater camera system that is used to navigate the machine around your tank. All of our cleaning services are recorded for your records and further review, and are performed while your tank remains in services.



Model: CST-600 Machine

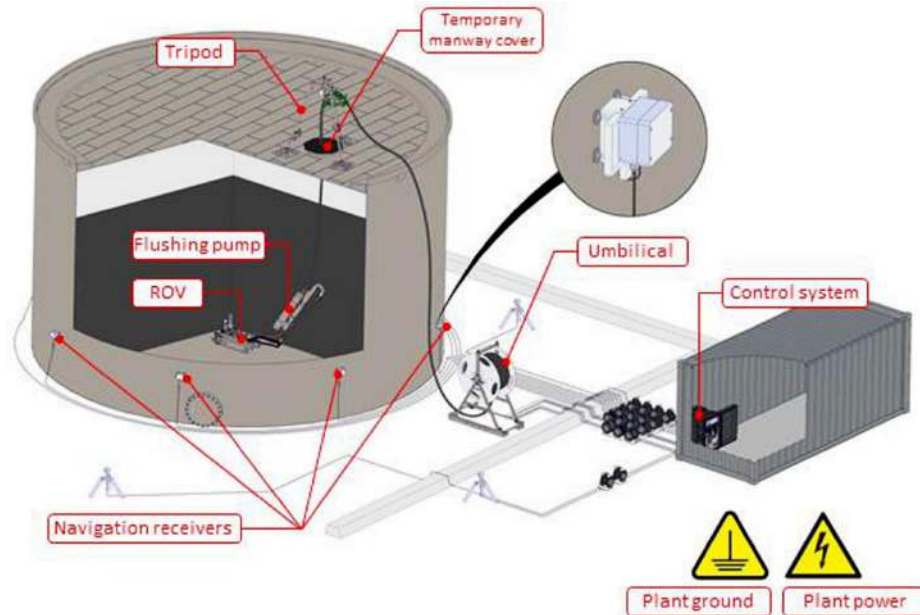


CST Machine "in action" cleaning

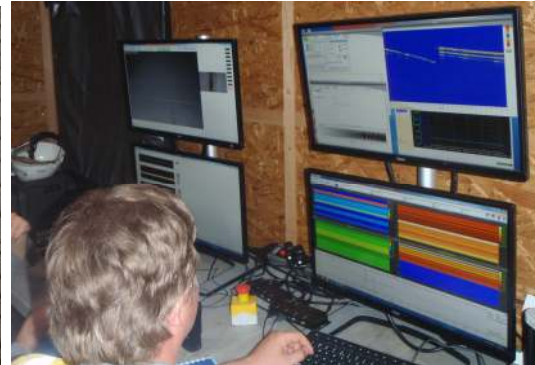


ITEM THREE: NDE/NDT ROV Ultra-Sonic Thickness Inspections

These inspection services are provided with our NDT Inspection ROV is equipped with an On-Board Camera System and Sonar for navigation and positions, as well as, the transducer array that is used to collect the U/T readings from the floor.



ROV Field Operations Foot Print



Inspection ROV and Control Center

The U/T transducers measure the ultrasound reflections of the product and soil side of the tank floor. The data acquisition system translates this signal into four outputs that are presented on-line along with the ultrasonic signal itself (see Figure A. below):



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- 1 Wall thickness (t)
- 2 Offset of UT to tank floor
- 3 Signal amplitude of the product side reflection
- 4 Signal amplitude of the soil side reflection
- 5 Ultrasonic signal (A-scan)

These outputs give a complete picture of the condition of the tank floor and provide all necessary information to detect and quantify features and anomalies.

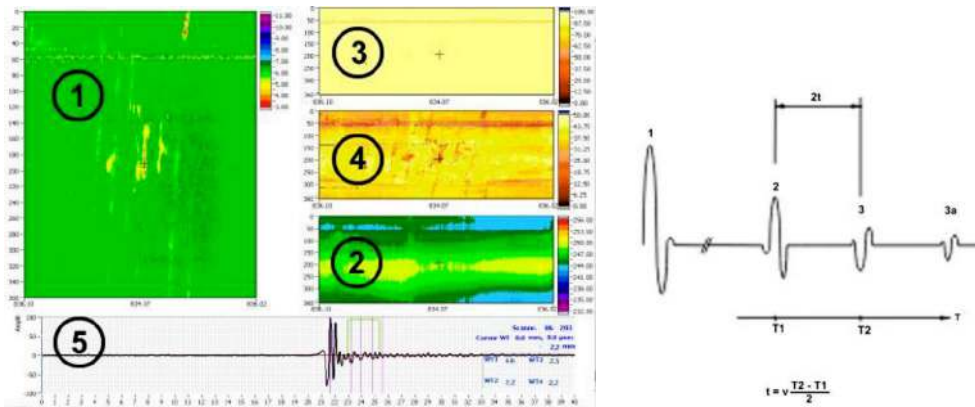


Figure A.

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