Underwater Positioning System (UPS) for SUSI
Positioning control during inspection of core barrel baffle bolts

UPS for SUSI allows clear allocation of underwater inspection positions.

Especially during baffle bolt Ultrasonic Testing (UT), the density of equal test objects is very high. A modern UPS promotes the understanding of test results for further evaluations. It controls and monitors the positioning values and eases the interpretation of bolt’s test results. They can be better presented to authorities and even fulfill international requirements and therefore highest standards.

For underwater inspection in hazardous environments, key technology is as indispensable as trained personnel to receive best results. The application and further development of Remote Operated Vehicles (ROVs) must be in the hand of experienced personnel. They know the different inspection methods and the technical components on which to adapt Non Destructive Examination (NDE) solutions. Based on SUSI, AREVA develops different solutions for underwater NDE and focuses on reactor internals inspection with submersible ROVs.

AREVA increases the quality of visual and ultrasonic testing through this solid positioning system. Even similar objects in a high density will be identified clearly and allocated verifiably.

The UPS is loyal and reliable in hazardous environments, especially in nuclear reactor cores.

The system consists of the following components:
- AREVA Remote Operated Vehicle (ROV) SUSI 420
- AREVA Ultrasonic Testing (UT) System
- EvoLogics® Acoustic Positioning System (APS)
  - Acoustic Ultra Short Baseline (USBL) unit
  - 2 x Acoustic pinger units
  - 1 x APS control unit

Acoustic Positioning System:
- Frequency Band: 38 – 64 kHz
- Transducer Beam Pattern: 70°
Underwater Positioning System (UPS) for SUSI

In 75% of countries with nuclear power plants, in core inspections could already be realized successfully with SUSI.

EvoLogics® APS equipment dedicated to SUSI 420

SUSI 420 UT equipment – quick installation on site

AREVA APS software application

This underwater NDE solution also fits to your requirements!

Your Benefits at a Glance

Acoustic Positioning System:
• Operation depth: 25 m
• Accuracy: Standard Deviation (STD) = 30 mm

The main features of SUSI 420 UT System are:
• high maneuverability
• radiation resistant electrical/mechanical components
• drives for all three directions of movement
• easy to handle
• clearly arranged control unit
• quick installation on site: shortest response time
• PAN & TILT Black and White tube camera

AREVA GmbH
Your contact: visual-testing@areva.com

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