

SUSI-Gen3 Submarine-System

Multi-Purpose Solution for Various Inspections and Non-destructive Examinations

SUSI-Gen3 is the fastest and most flexible solution for underwater VT-1 and VT-3 visual inspections, specific NDE purposes as well as search and retrieval of foreign objects.

Challenge

Performance of visual inspections as well as other NDE examinations are mandatory according to plant pre-service and in-service inspection programs.

Execution during outages on the critical path, where time pressure is an issue, calls for rapid performance without compromising precision and reliability. Time constraints also require efficient contingency tools for ad-hoc inspections or foreign object search and retrieval.

Lifetime extension programs will demand additional inspection scopes to be performed.

Solution

SUSI-Gen3 is a multi-purpose device for underwater visual inspection and NDE of various reactor areas and additional applications.

Visual Inspection (VT-1 and VT-3) of

- Reactor Pressure Vessel/RPV internals
- Main coolant pumps/Reactor coolant lines and other piping
- Pressurizer/accumulators/tanks primary and secondary side
- Steam Generator primary and secondary side

Other applications:

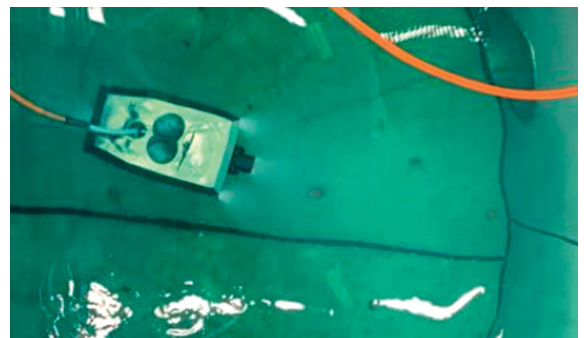
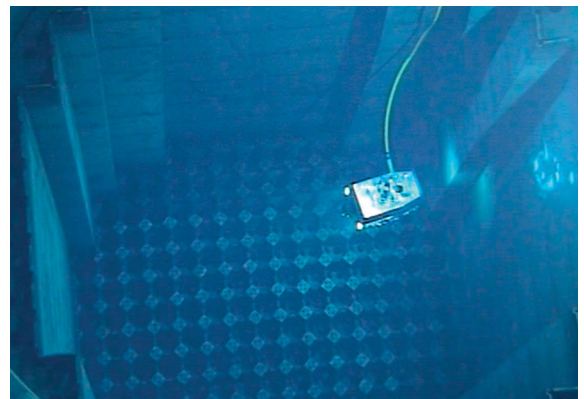
- Foreign object search and retrieval (FOSAR)
- UT-inspections of core barrel and core baffle bolts
- Observation of underwater component handling

Customer benefits

- Time saving thanks to rapid and highly reliable performance
- Universally applicable multi-purpose equipment family
- Foreign object search and retrieval for safe operations
- Highly experienced and certified personnel



SUSI-Gen3



Inspection applications

Your performance
is **our** everyday **commitment**

Technical information

Main features:

- Extremely sturdy platform for the highest picture quality
- High maneuverability and four freely positionable axis
- Components are highly tolerant and resistant to radiation
- 2 camera options with rotation, pan and tilt functions:
 - Radiation resistant full HD CCD camera (LVT140 CPT)
 - Ultra high-rad black/white tube camera (LVT140 TPT)
- Integrated line and distance laser for precise measurements
- Easy operation by new control unit
- Rapid setup times

Qualified according to several codes and standards:

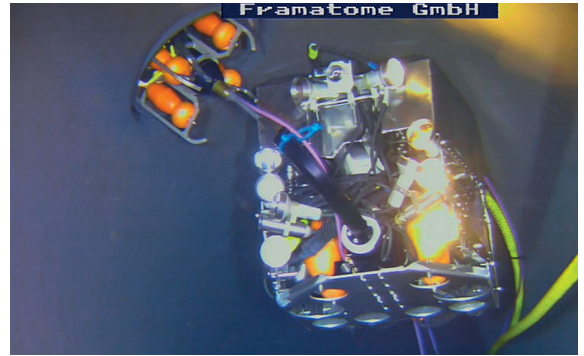
- DIN 25435-4
- KTA 3201.4 / KTA 3204
- MRP 227-A
- ENIQ
- ASME, Sec. XI

Additional equipment / Add-ons:

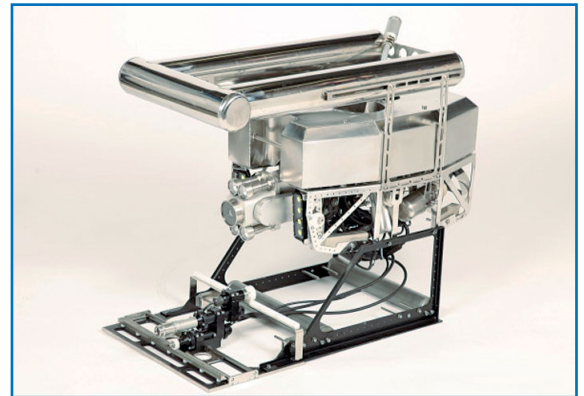
- Various grippers, suitable for the recovery of loose parts
- Suction device for the removal of loose parts
- Satellite camera

Dimensions / Weight:

- Size: 280 (H) x 360 (W) x 600 (L) mm
- Weight: 25 kg
- Cable length: 70 m



SUSI with satellite camera



SUSI with X-rail for UT-inspections

Key figures

More than **500** successful SUSI applications worldwide

Currently **16** SUSI systems in use worldwide, mainly for NPP outage services

References

Many customers request the availability of SUSI on-site for the entire duration of their outage to ensure it is ready to use for ad-hoc tasks without delay.

Reactor types / designs:

- KWU BWR/PWR
- Framatome PWR
- Westinghouse PWR
- B&W PWR
- VVER

NPPs in:

- Europe (Germany, Switzerland, France, Belgium, Netherlands, Sweden, Bulgaria, Slovenia)
- USA
- Brazil
- South Africa
- Japan

BWR: boiling water reactor PWR: pressurized water reactor VVER: water-water energetic reactor

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