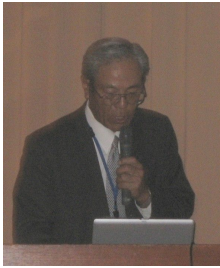


Introduction of dose reduction technology

“Introduction of the Decontamination Method Which Uses Blasting”

Toshiaki, Ninomiya, Mitsubishi Heavy Industries, Ltd., Japan



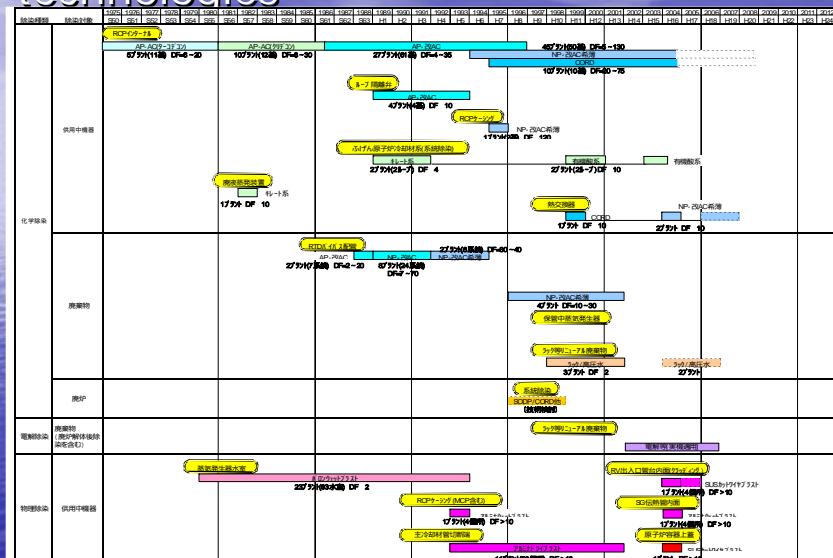
Mr. Ninomiya introduced latest decontamination technologies by Blast. Blast decontamination is the technology that emits a jet of polishers by using compressed air or centrifugal force. By using that impact, this method removes metal oxides, which contains radionuclide. Polisher is grid stainless particle, whose diameter is usually 0.1 ~ 2mm, and emitted at the jet pressure 15 ~ 6kg/cm² with the jet angle 45°.

Cavitations Jet (CJ) decontamination is the decontamination method that uses a shock wave generated by Cavitations. Mitsubishi mixed polish into CJ, and found that when the combination of CJ Blast used for decontamination, the result is better than the total result of the individual use of them(DF>100).

The method of rotating flow polish is new Blast technology that Blast materials is mixed into rotating air stream.

Usual air blast cannot produce necessary flow speed to decontaminate inside of bending pipe and long pipe because of the quick reduction of speed just after emit of a jet but the method of rotating flow polish can decontaminate effectively these type of pipes

2. History of Mitsubishi decontamination technologies

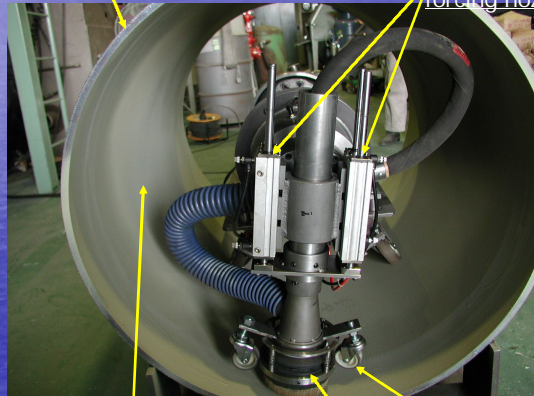


3. Decontamination using blasting

Functional examination situation

Pipe (nozzle neck mockup)

AIR Cylinder for forcing nozzle



Grinding Trace

Guide roller

Nozzle (Vacuumed blast gun)

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5. CJ + blast decontamination

- The decontamination result in a system application test

Object	Before	After	Decontamination time	D.F.
B-SG HOT	40mSv/h (14.97mSv/h)	0.7mSv/h (0.09mSv/h)	60 min.	166
D-SG COLD	25mSv/h (9.96mSv/h)	0.63mSv/h (0.09mSv/h)	90 min.	111

Notes : () inside value is the dose rate to extracted

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