

FILTERED CONTAINMENT VENTING SYSTEM BACKFITTING

High Speed Sliding Pressure Venting with enhanced iodine retention

9 European NPPs retrofitted those NPPs with the Framatome FCVS including the organic iodine retention stage (FCVS PLUS).

Challenge

Based upon the observation of the PHEBUS test organic iodine is produced in a higher extent during core melt accidents as assumed before. Although the expected total amount of CH₃I remains small, the radiological impact of unfiltered organic iodine might remain and become the major source when high decontamination factors (DF) are reached for aerosols and elemental iodine.

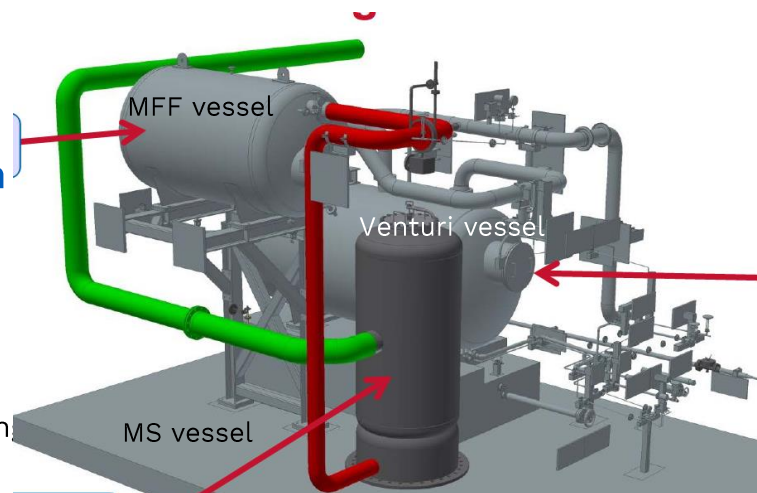
Solution

Molecular Sieves is designed to target specific adsorptive, e.g. organic iodine. Additionally, they are highly insensitive to poisoning effects.

- Design target: Fit into existing building Structures
- Minimize changes in existing installation
- Solution currently under implementation

Customer benefits

- Prevention of excessive containment pressure
- Protect the structural integrity of the ultimate fission product barrier
- Excellent purification levels of gas discharges, even in long-term operation
- Greatly enhancing the retention efficiency of organic iodine



Technical information

Required Decontamination Factors

- Aerosol 1 μm (MMD) 1 000
- Elemental Iodine 100
- **Organic Iodine from approx. 5 upgrade to 50 / 100**

FCVS Standard

Venturi Vessel Filter Vessel

- Length approx. 4.5 m 3.3 m
- Diameter approx. 2.5 m 1.8 m
- Weight approx. 16 t 6 t

Upgrade to FCVS PLUS FCVS

STANDARD with additional molecular sieve vessel

- Height approx. 3.5 m
- Diameter approx. 1.4 m
- Weight approx. 8 t

Key figures

78 NPP units equipped with Containment Venting Systems from Framatome worldwide (already installed or currently under construction).

**Your performance
is our everyday commitment**

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