The IRWST POOL LINER

The IRWST (In-Containment Refueling Water Storage Tank) is a pool which contains a large amount of borated water which is monitored with respect to homogenous concentration, level and temperature.

The IRWST is connected to various safety and operational systems taking and returning borated water to and from the IRWST, i.e. in case of accidents its inventory ensures both heat sink and reservoir for recirculation mode.

The liner function of the IRWST ensures water leak tightness to preserve the necessary water inventory for the designated functions of the IRWST.

The IRWST Liner consists of:

- Anchor plates in first concrete
- Stainless steel framework in second concrete welded to the anchor plates (including penetrations e.g. for pipes)
- Steel liner sheets
- Leak detection monitoring system
- Partition wall
The IRWST concrete surfaces are equipped with a stainless steel liner. The IRWST liner consists of stainless steel sheets welded to a stainless steel frame which is embedded in second concrete. The frame itself is welded to anchor plates in first concrete. Stainless steel anchor plates in the liner area are used for attaching components or equipment situated in the IRWST e.g. retention baskets and filters for the sump boxes with sump suction lines etc.

Reference

- Finland: NPP Olkiluoto 3