

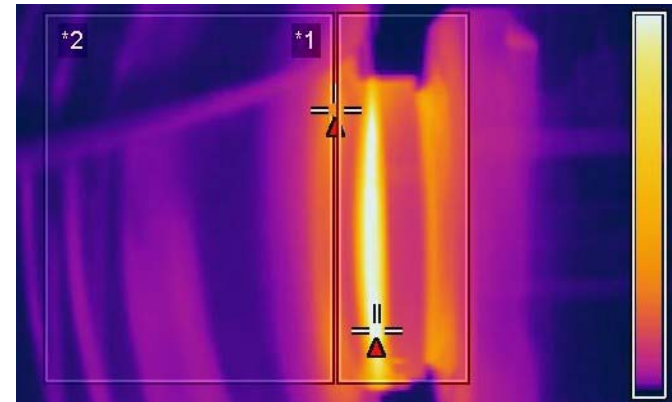
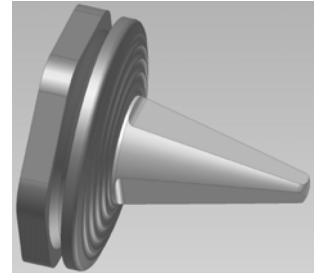
FSW at SKB

- $\geq 6,000$ canisters will be deposited, starting 2018
- SKB chose FSW as main welding method in May 05
- Tool requirements: temp. up to 950°C during ≈ 1 hour
- Current tool: MX TrifluteTM probe design, Nimonic 105 probe material, Densimet shoulder material



Future work at SKB

- Eliminating the human factor
 - Adaptive thermal management
 - Using software and/or convex scroll shoulder
 - Increase process window for tool temperature
 - New tool probe design, material and/or surface treatment
- Weld flat bottom horizontally in Canister Factory
 - Optimize joint design/location
- Developing repair procedures
 - Start in exit hole at joint line
- “Maximum-thickness” study at TWI Yorkshire



2nd Nordic FSW meeting

Location: Oskarshamn, Sweden

Field trip(s): Clab – Central interim storage facility for spent nuclear fuel

October 1, 14:00-16:00

Äspö Hard Rock Laboratory – an underground laboratory

October 1, 16:15-18:15

Note: Preliminary schedule, possible to attend only Äspö, see skb.se for facility-information and skyways.se for flights from Arlanda

FSW meeting: October 2, 9:30-15:45 @ the Canister Laboratory

Preliminary agenda:

- NDT reliability study at SKB incl. ultrasonic & X-ray testing equipment
- Quality assessment at SAPA
- Quality of FSW in steel at Sandvik Process Systems
- Live-FSW of lid to 5 cm thick copper canister & Canister Lab.-tour