Supplement of Safety of Nuclear Waste Disposal

Pilot plant tests to demonstrate the functionality of sealing elements made of salt cut bricks

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Pilot plant tests to demonstrate the functionality of sealing elements made of salt cut bricks

1. Motivation: initial porosity of crushed salt is given by some 35 - 40% 
initial porosity of salt cut bricks is given by some 1 – 5% depending on joint thickness and brick size

2. Preliminary investigations into the sealing behaviour of salt cut surfaces

3. Construction of a pilot plant to analyze in detail the performance of a sealing element made of salt cut bricks

4. Production of salt cut bricks – avoidance of axially continuous joints

5. Triaxial THM test control and evaluation

Permeability calculation

Measurement results:

- 12 t basic raw material → 0.66 m³ / 1.5 t sealing element
- 6 t crushed salt
- 4.5 t offcuts
- 7 salt bricks per week → 1 a per sample
- 375 bricks per sample