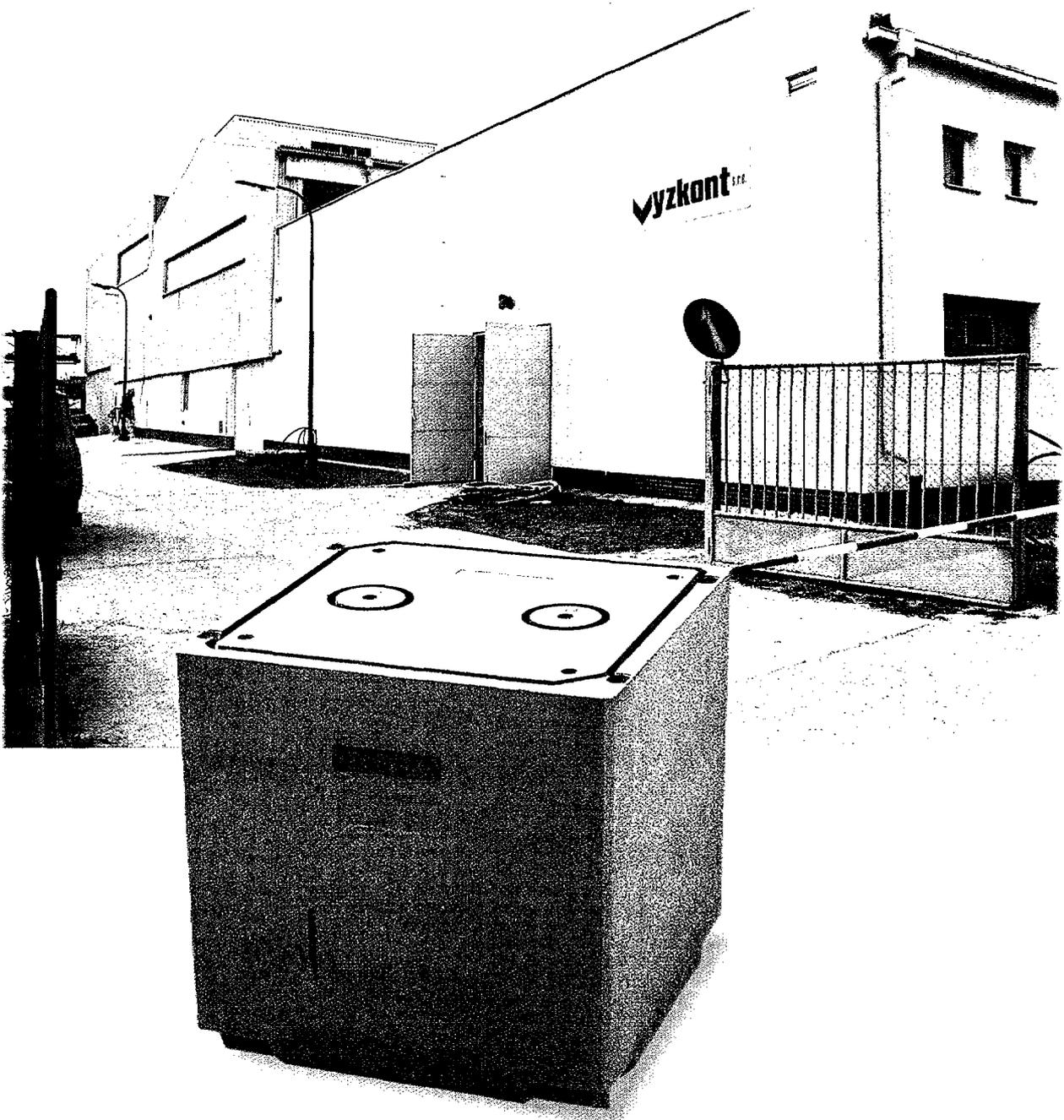


VYZKONT spol. s r.o., Mikovíniho 8, 917 01 Trnava



SK00K0382

FIBRE - CONCRETE CONTAJNER

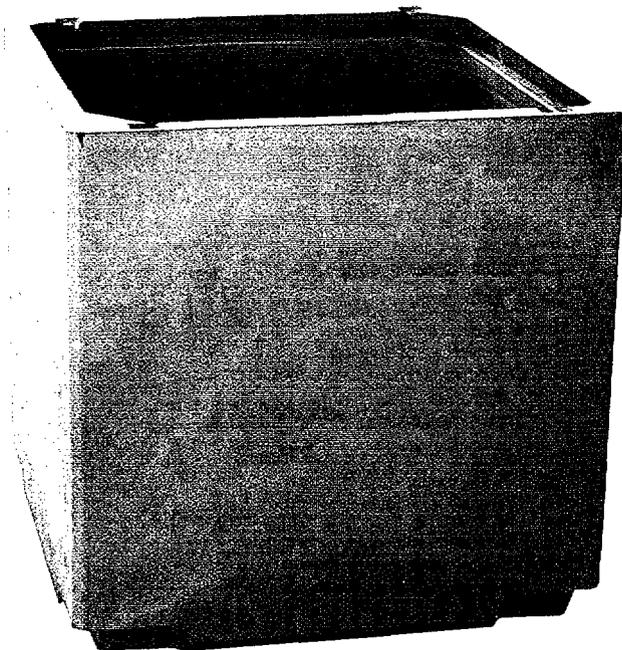


DESCRIPRION OF FIBRE-CONCRETE CONTAINER:

A fibre-concrete container is made of fibre-concrete that contains cement, aggregate, sand, filler, flame-silica, superplastificator, water and scattered metal fibres.

The fibre-concrete container has a dice shape with outer dimension 1,7x1,7x1,7m. It is mounted of a container body, a container cover and two caps.

The fibre-concrete container manufactured for storing of low and intermediate radioactive waste.



INTERIOR DIMENSIONS OF CONTAINER:

Useful height	$H_u:$	1.430 m
Useful width	$S_u:$	1.450 m
Useful length	$L_u:$	1.450 m

In each point there is:	thickness of fibre-concrete min.	100 mm
	thickness of cover	145 mm
	thickness of bottom	125 mm

OTHER PROPERTIES:

Useful capacity	$V_u:$	~ 3,00 m ³
Weight	Body:	3.500,00 kg
	Cover:	690,00 kg
	Cap:	25,00 kg
Total weight		≅ 4.240,00 kg

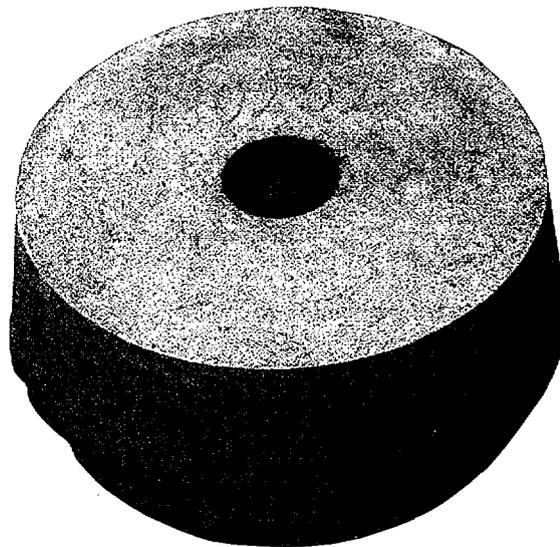
Maximum weight of loaded container must not exceed: **15.000,00 kg**

THE REQUIREMENTS FOR FIBRE-CONCRETE CONTAINER TO STORE

Container resistance - high quality of container wall material is defined and confirmed by French Agency of ANDRA.

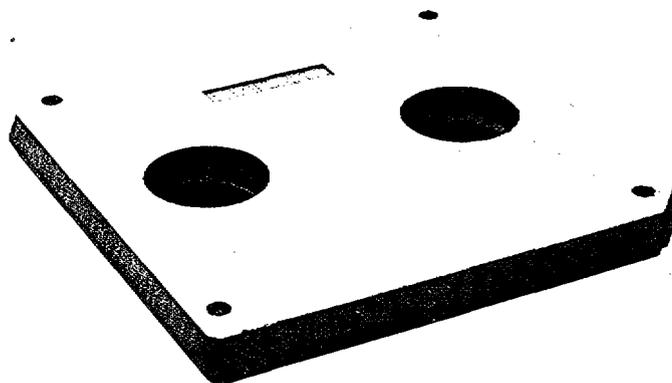
The definition is based on a fact that the material layer completely surrounding radioactive waste is able in the conditions of storing with the negligible probability of damage:

- to bear mechanical stress within 300 years protecting
- to insulate radioactivity within 300 years protecting radioactive waste against water infiltration and stopping radionuclides migration outside in damp environment.



FIBRE-CONCRETE CONTAINER UTILIZATION TO STORE RADIOACTIVE WASTE SOLVES THESE PROBLEMS:

- increase of stability of stored packages of radioactive waste
- watertightness within 300 years at least
- static stability of bearing space
- better utilization of bearing spaces
- insulation of radioactive waste in a case of seismic and geological event
- increase of fire resistance
- transport of radioactive waste



FIBRE-CONCRETE CONTAINER MEETS THESE PHYSICO-MECHANICAL PROPERTIES

- resistance to pressure	(after 28 days)	>	50,0 MPa
- resistance to bending	(after 28 day)	>	4,5 MPa
- shrinkage	(after 28 day)	<	350,0 $\mu\text{m/m}$
- watertightness	(after 7 day)		no ingress

OTHER STATED REQUIREMENTS MET BY FIBRE-CONCRETE CONTAINER ARE:

- diffusion constant of tritium water for thickness of 2 cm	>	$1,5 \cdot 10^{-3} \text{cm}^2/\text{day}$
- diffusion constant of caesium for thickness of 1 cm	>	$1,0 \cdot 10^{-3} \text{cm}^2/\text{day}$
- permeability of nitrogen	>	$5 \cdot 10^{-18} \text{cm}^2$
- gamma radiation resistance total absorbed dose 10^6 Gy		without any remarkable changes of mechanical properties
- gas resistance		
	before the test	$0,619 \text{ atm cm}^3$
	after the test	$0,615 \text{ atm cm}^3$
- loading test by alternating og temperature cycles		20% relative decrease of strength
- shatter test from the height of 1.2 m on the edge of the bottom total weight: 11.510 kg		cover shift: 1 - 3 mm (out of the body of container cleaded edges, without any changes of weight)

CONTACT:

VYZKONT spol. s r.o., Mikovíniho 8, 917 01 Trnava

Contact person: Ing. Lubomír Hladík
telephone: 0905 625 549
0805/512 859
fax: 0805/521 860