

TRANSPORT VESSELS EQUIPMENT FOR LONG MATERIAL TRANSPORTATION

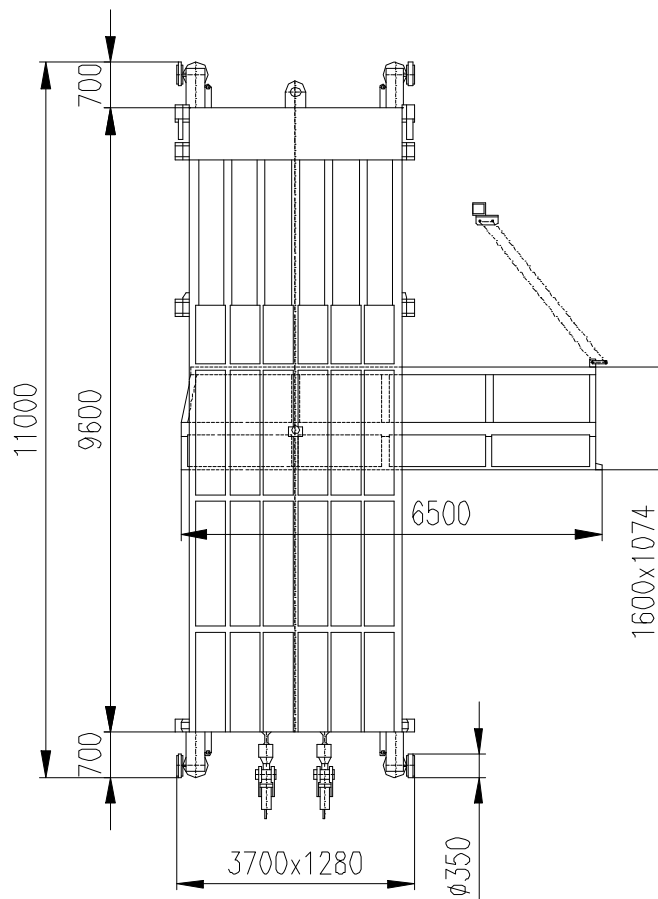
Utilization:

The equipment serves for the transportation of long materials in containers to mines. The containers may be placed in the cage or suspended under the cage. Material is transported in wagons from exterior to the place of use in the mine without trans-loading.

The container permanently suspended in the cage is used by the winding equipment exclusively serving for material transportation, eventually by the single-acting winding equipment where it is possible to use the special cage with a container instead of the balancing counter-weight. The container cage may also contain one upper floor for transportation of persons.

The container suspended under the cage is used in the cases when regular capacity of material transportation is not requested. The container is then suspended under the cage only in the case of its utilization.

Picture of a Container in a Cage with the Main Dimensions



Description:

The equipment consists of the container cage, container and tipping equipment. The cage consists of the head, transport floor, carrying tow-bars and base. The head is a welded cabinet beam with the winding rope suspension, clamping device, fix shaft guides and the wheel guiding above them. The transport floor with a solid floor-plate is designed for a tandem of two bogies. According to the container tipping kinematics design the cage is either equipped with a hinge anchoring or with a curving rail for the container guiding. The base is of a frame structure covered with a floor plate and equipped with rails for eventual transportation of the wagons. On the fronts there are fix shaft guides and consoles for wheel guiding. In the middle there are suspensions for eventual lower compensatory ropes. The container itself is a weldment of frame structure and in a bottom part it is equipped with profiles for the wheels of the transport wagon and for its position blocking. On the bottom side there is a solid front plate with a soft lining for supporting of the long material transported in the vertical position. The tipping is performed with solid tow bars or ropes suspended on the pit bank and floors structure. Another version of a container in the cage is a container type equipped with guiding pulleys and it runs in the cage in a curving guiding. This cage usually contains its own drive for the container retraction.

Container for Long Material transportation Suspended under the Cage

Is basically of the same construction as the previous type. Before the material loading it is suspended in a special anchor and collar mounted under the winding cage. The container tipping equipment on the pit bank and on the floors is formed by rope suspensions.

Function:

The container permanently suspended in the cage – after the container cage arrives to a mine floor the container in the cage is unblocked and it is suspended on the tipping equipment. The container is slowly turned from the vertical position to the horizontal one. After the handling is finished the bridges are tilt to the shorter side, the wagon with material is unblocked and it is pulled out from the container. The vice-versa handling brings the container to the horizontal position again and when it is blocked in the cage, the new transport cycle can start.

The container controlled by an air winch in the head of the cage is switched on after the connection to the air source and it is lifted with help of a pulley cable transmission. The front driving wheels of the container are guided by the curve in the cage, the back wheels are traveling on the rail in the cage and the pit bank or on the floor.

The container suspended under the cage shall be in the cases of utilization at first suspended in special hinges. Its handling is the same as for the above stated case.

Technical Parameters:

Cage	dimensions are given by the mining pit profile and the container length
Container	for the wagon and material in the length of 6 m
Load	2 – 3 t

Safety:

The equipment shall with its design answer to the safety requirements of the Public Notices No. 22/1989 Coll. and No. 415/2003 Coll. of ČBÚ (Czech Mining Office Board).

Delivery:

The equipment is delivered with a protective coating, the functionary surfaces are preserved with preserving oil. Further cage equipment as the wheel guiding, guard-rails, shelter etc. are delivered separately.

The integral part of the delivery is the accompanying documentation: the assembly drawing, Operation Manual, the list of spare parts, Manufacturer's Certificate, material certificates, Test Reports.

Assembly:

The assembly shall be only performed by experienced and trained staff authorized for such work by the company leadership. The assembly shall run under the technical supervision, before starting the equipment operation it is necessary to carry out a test run and the function tests according to the company leadership determination.