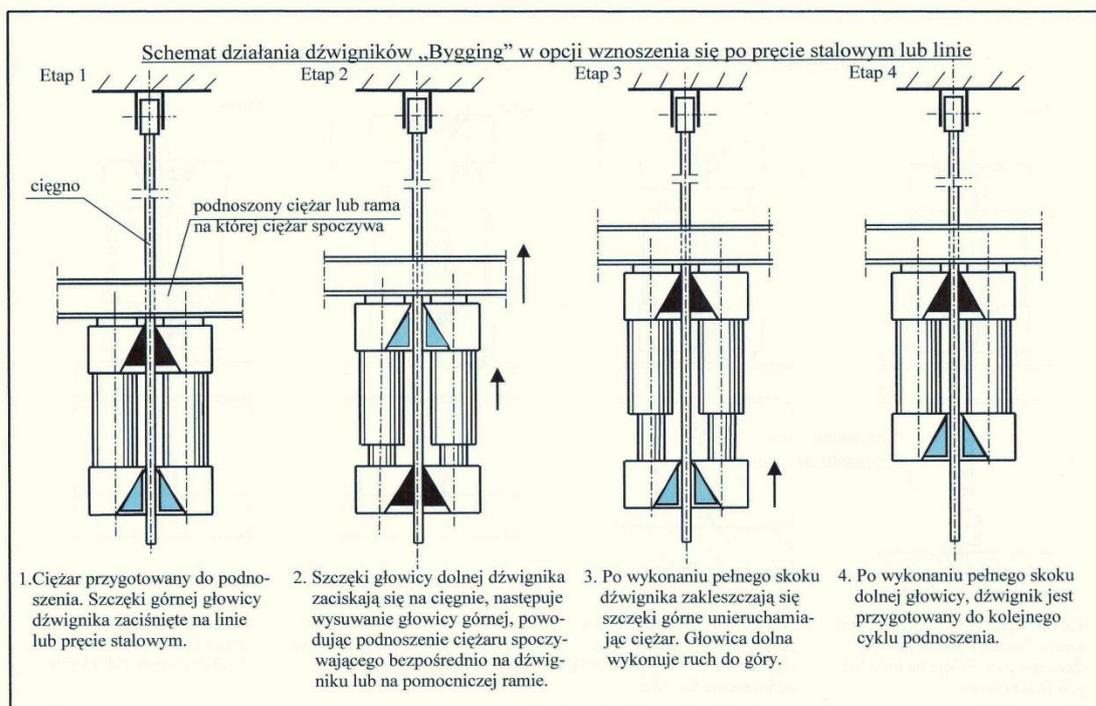
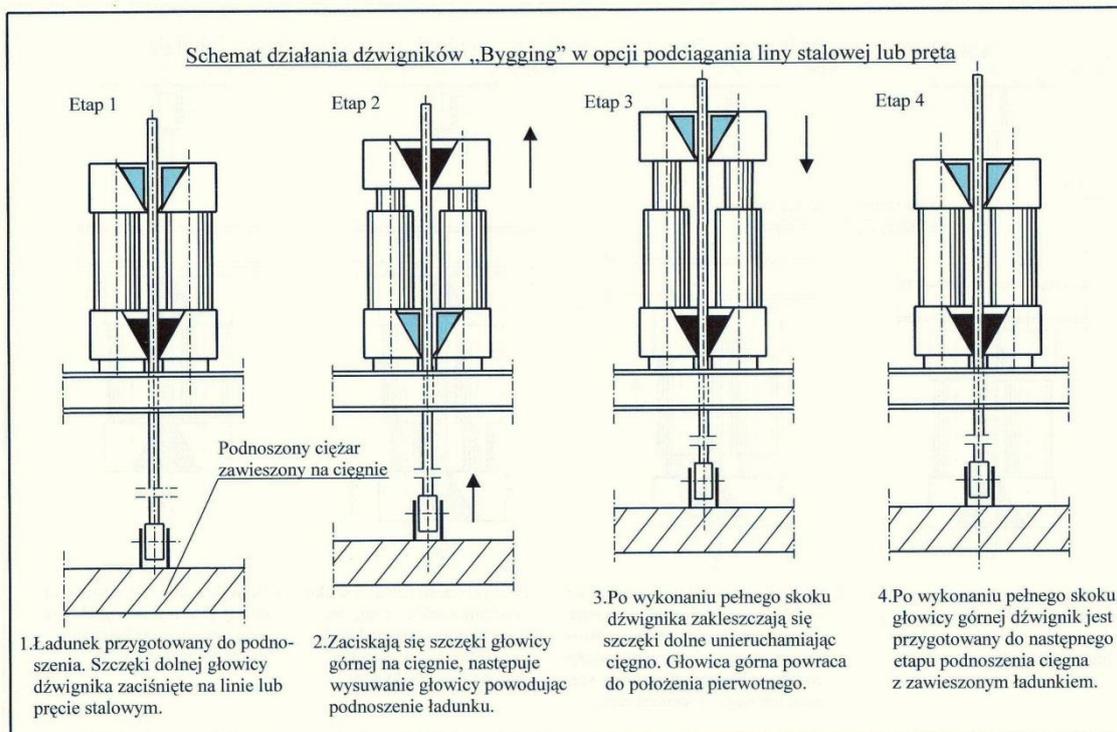
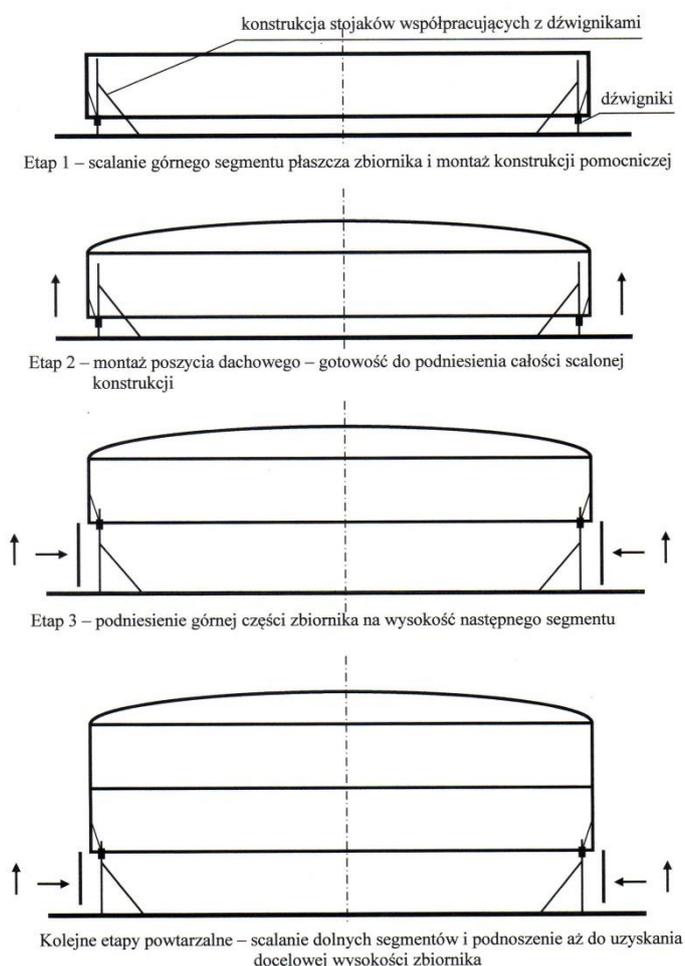


Schemes of operation of „Bygging” – a hydraulic jack



Schemat montażu zbiorników metodą „od dachu” dźwignikami „Bygging”



integrated ring – there is no need to rise high scaffoldings for side surface welding or roof integration. For assembly of the steel sheets, a light mobile crane may be applied.

Universal structure of the assembly pillars enables their multiple application, which has significant influence on lowering the costs of assembly for next tanks.

It needs to be pointed that a significant factor that hinders the process of assembly with a traditional method of upward extension with steel sheets or roll method – are strong winds.

When it comes to assembly with application of the “from the roof” method, disadvantageous weather conditions **are not** so significant.

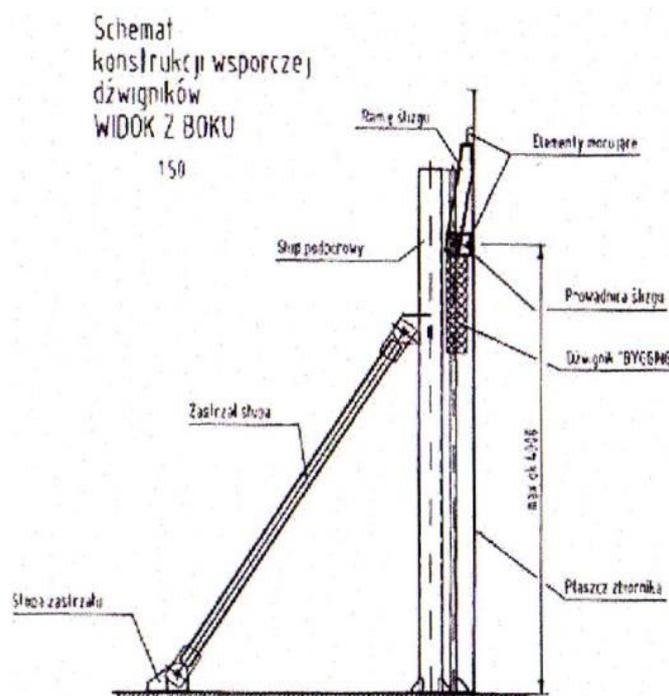
A description of technology of tanks assembly with a „from the roof” method

On the welded bottom of a tank, the highest ring of the side surface is mounted together with a roof structure. Assembly pillars that support the structure are placed on the circumference of the tank’s bottom.

Number of the pillars depends on the tank’s weights and its diameter. The assembly pillars have steel guides welded to them, which the trailing “Bygging” jacks can move on. This motions causes elevation of the integrated tank’s elements through retracting support arms. The equality of elevation achieved by the jacks is maintained by one hydraulic pump that powers all the jacks.

Having achieved a proper height, sheets of the next ring are placed and integrated. After welding the elevated part of the tank with the integrated lower segment and lowering the jacks, it is possible to on the next stage of elevation. Subsequent stages of assembly take place analogically, until the desired height is obtained.

In this case, welding works are conducted only on the level of **2-3 m, i.e. on the height of the sheets of the**



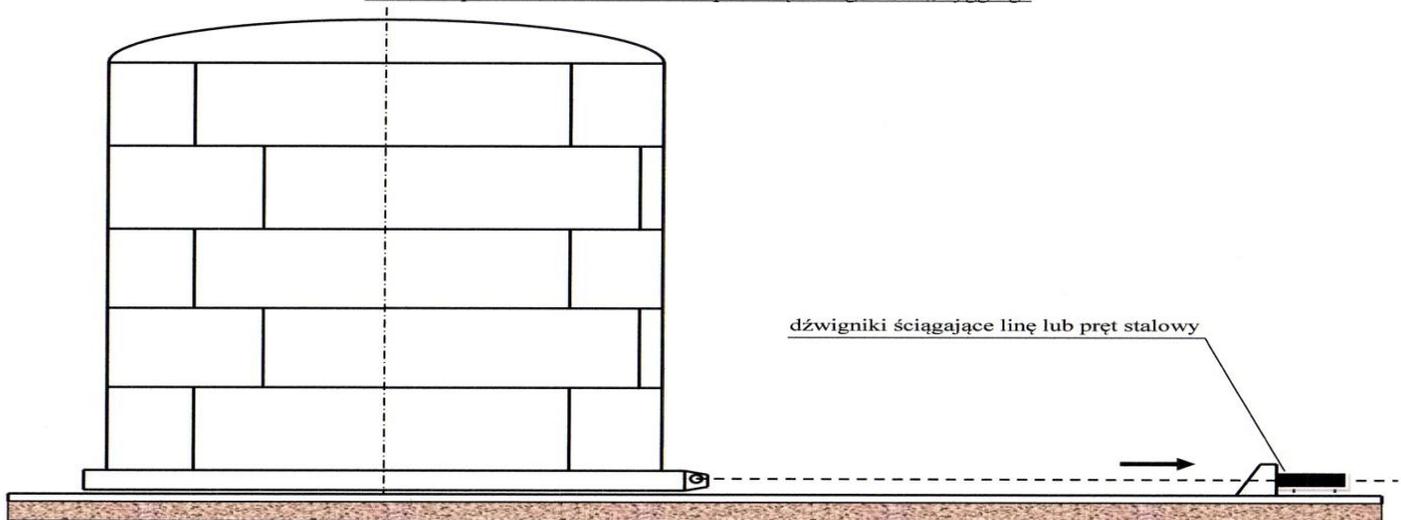
The technology presented above allows to mount tanks regardless of their weights and dimensions.

Horizontal movement of objects, machines and devices

Movement of heavy objects may take place by pulling with jacks through a steel bar or a band. Depending on the necessary force, any number of jacks may be involved.

The above mentioned method may be applied to place machines and devices in roofed halls or buildings, to move objects built beforehand nearby to their final positions, to place devices unloaded from means of transport on fundaments through special assembly masts without using cranes, etc.

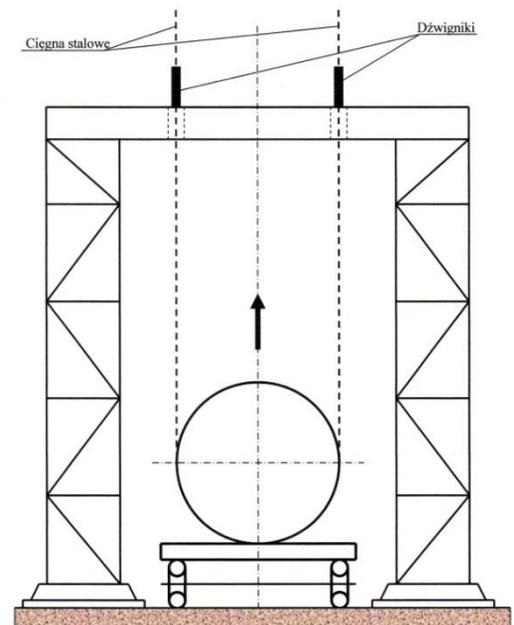
Schemat przesuwania obiektów za pomocą dźwigników „Bygging”



Unloading with jacks with use of special masts

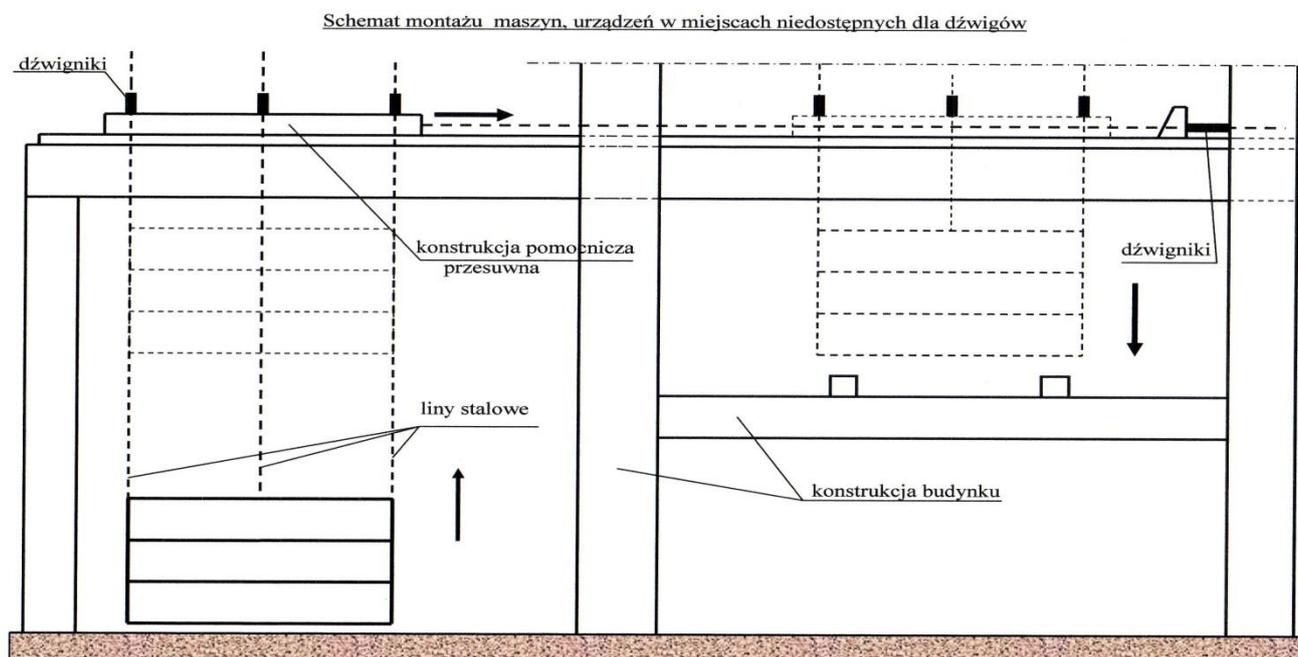
The jacks allow to take heavy loads from the means of transport using auxiliary assembly masts, without application of cranes with a possibility of horizontal movement. This method is used when placing heavy loads, machines to industrial objects, halls, etc. where there is no possibility to unload it with a crane because of lack of space or insufficient height of the building.

Schemat rozładunku urządzeń dźwignikami „Bygging”

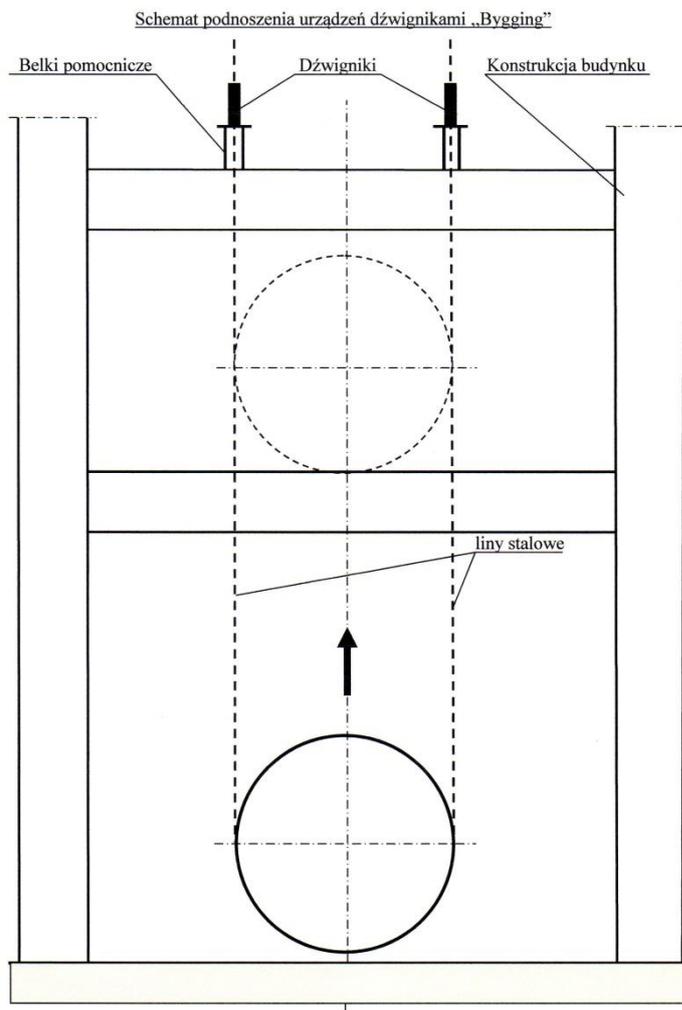
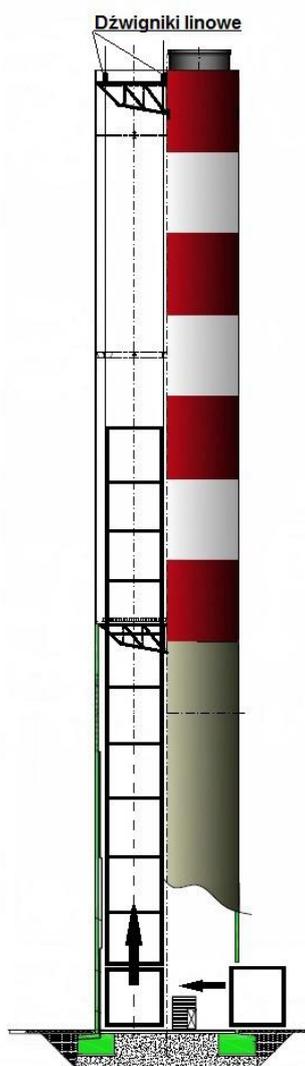


Fitting of heavy machines inside buildings

The following scheme presents the process of assembling a heavy-weight device through the jacks in a situation, when it is impossible to apply a crane because fundaments are located on a significant height inside the object. The jacks allow to elevate the device, move it to the building and place it on the fundaments..



Elevation of structures, machines, devices, elements of turbines, boilers in industrial buildings, halls or in places that are inaccessible for cranes, or when their weight goes beyond the possibilities of hoisting capacity of standard equipment after previous movement to the inside of the object in "0" position.

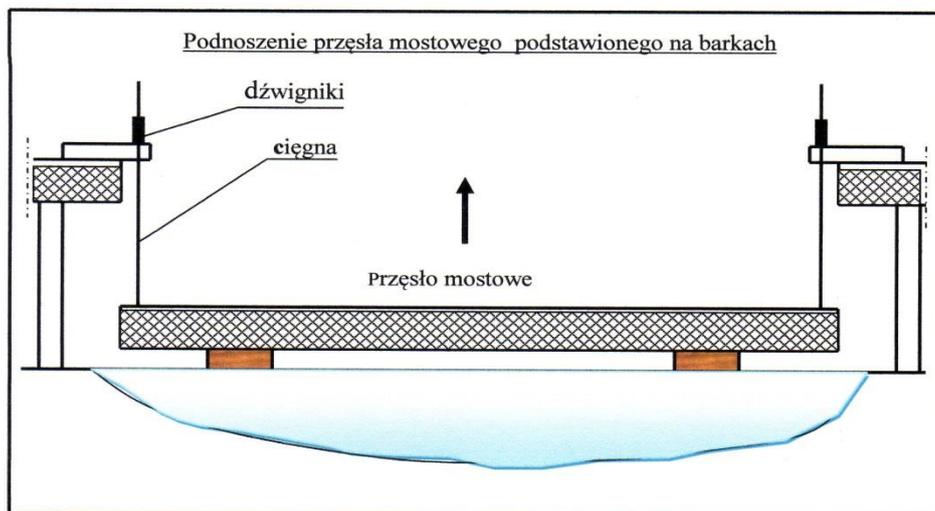


Fitting of flues

It is a common practice to use hydraulic jacks to elevate segments of flues integrated on level "0".

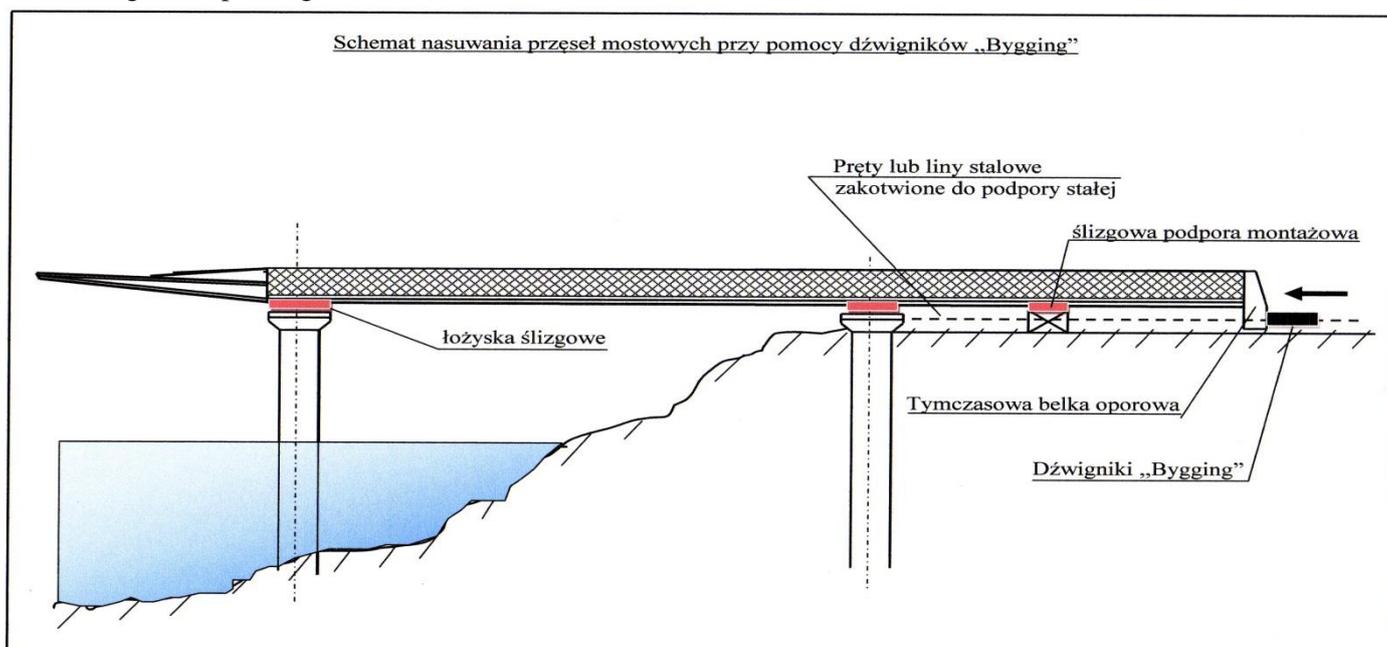
Elevation of bridge spans

One of the methods in assembling bridges comprises of transporting the spans to the place of assembly on barges and elevating through the jacks situated on a special auxiliary construction.

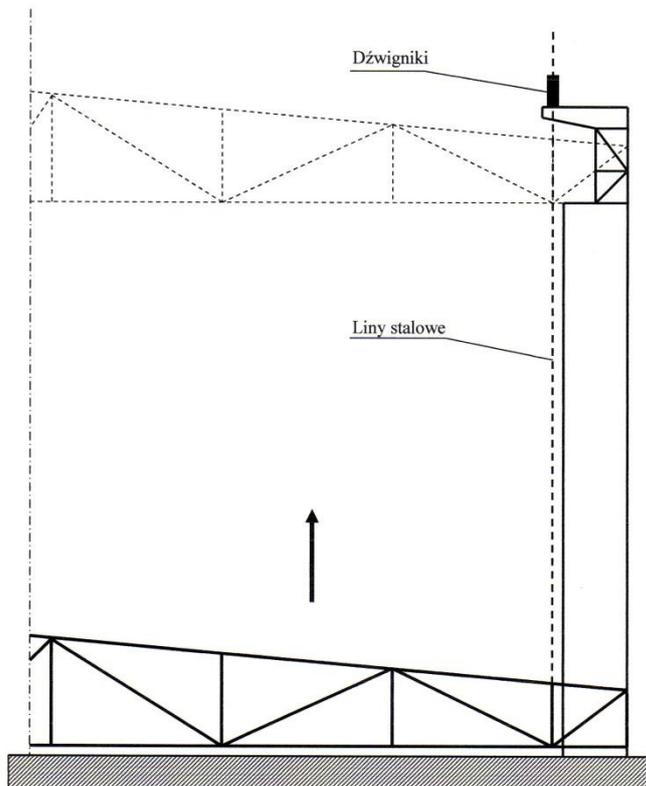


Sliding over of bridge spans

The jacks are used to slide the bridge spans over the supporting pillars, integrated on the river banks. The jacks perform walking movements through a steel band changing position of the spans. The number of jacks is chosen according to the pushing force that is needed to win with friction resistance.



Schemat montażu konstrukcji dachowej dźwignikami „Bygging”



Elevation of a dome roof integrated at the bottom of a ferroconcrete silo with jacks situated on the circumference of the silo's crown.

Elevation of spatial structures integrated on level “0”

The jacks allow to elevate overhead cranes, single roof beams or monolithic roof structures and other spatial elements integrated on level “0” to the desired height – elimination of heavy cranes, scaffoldings, minimized necessity for work at heights.

