

BYGGWIK (UK) LTD.



TANK JACKING

and

HEAVY LIFTING



TANK JACKING

NEW TANKAGE

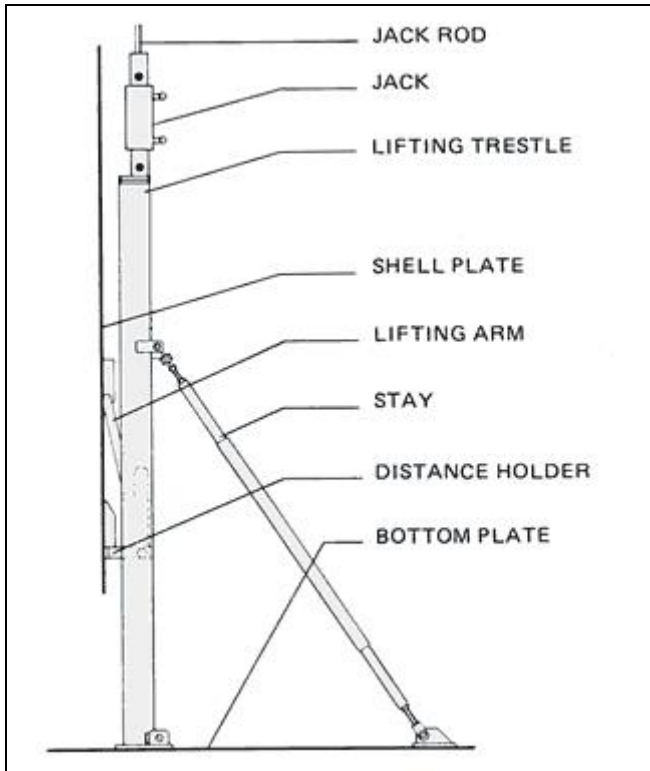
Description of Equipment.

Hydraulic Cylinder Type BW 12-200

Lifting Capacity	12 tonnes at 200 bar o.p.
Lifting Stroke	110mm.
Weight	Approx. 25kg

Lifting Trestle with Two Supporting Stay Legs

Safe working load	12 tonnes
Maximum lift height	2.5m or 3m
Total unit weight	Approx. 200kg
Largest component	Approx. 75kg
Jack rod	27mm diameter

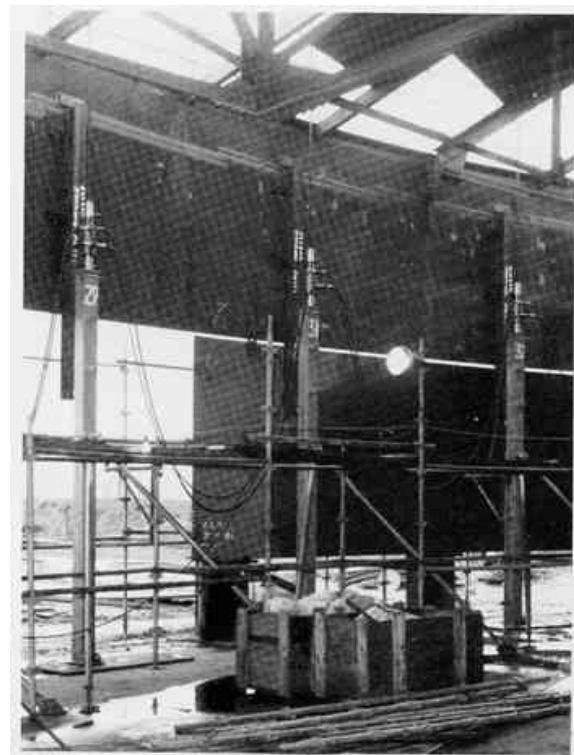


THE BYGGWIK TANK JACKING SYSTEM IS SAFE, SIMPLE AND COST-EFFECTIVE. IT HAS THE FOLLOWING ADVANTAGES.

1. Nearly all work can be done at or near ground level, reducing risk of accident and improving quality of work.
2. Welding is unaffected by weather. Generally, it can be carried out under the protection of the tank itself.
3. Wind damage is eliminated by the protective tank roof during welding of the shell.
4. The hydraulic jacks are connected to the load by a fail-safe friction grip system. The tank cannot sink down even if the pump or hose fail.
5. BYGGWIK jacks do not rely on springs too close to the hydraulic jam. The system is double acting, (moved by pressure each way) thus the jacking cycle is reduced.
6. Cranes and lifting tackle are not required to set up the BYGGWIK system; jacks can be set up by 2 to 3 men.
7. The provision of a walkway enables the resetting of jacks and the inspection of welding and painting to be carried out simply and safely.

Method Statement

1. Lay down floor plates of tank, top course of plates, roof beams and roof plates leaving holes for jacking trestles.
2. Assemble jacks inside tank and erect. Weld base plate and stay legs cleats to floor of tank.
3. Connect lifting arm and distance holder to inside of tank by means of lifting cleats.
4. Lift tank to height required to position second course of plates.
5. Weld in plates, lower jacks, reconnect to shell and lift again.



BASE REPAIR

DEMOLITION

By modifying the tank erection jacks from friction grip to positive locking, it is possible to lift and lower tanks safely and quickly for base repair, annular replacement, level correction and floor renewal. The same modified equipment can also be used for tank demolition. This gives the advantages of improved safety through working at ground level, improved scrap quality for reprocessing, or the ability to re-erect the dismantled tank on another site.



30x30 ft. U.K. Tonnes. New Base



128x120 ft. Qatar. 720 tonnes.
New base – New floor.

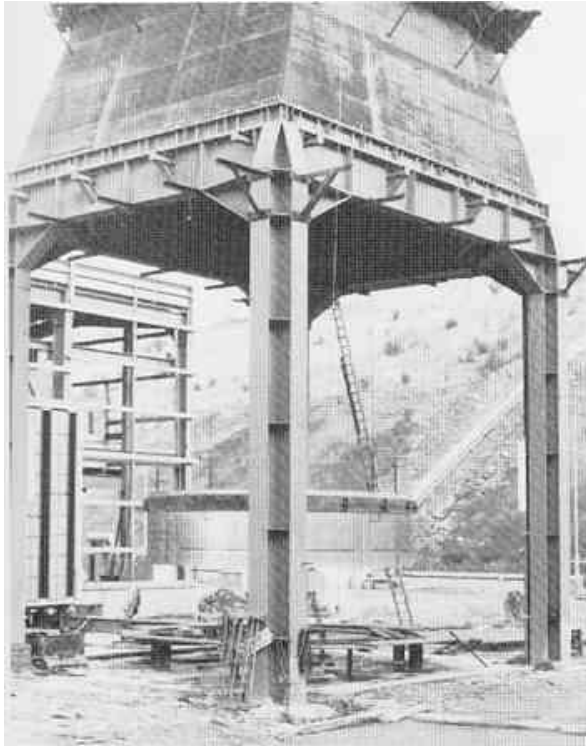


Base repair in progress

HEAVY LIFTING

The use of cranes is expensive, and in confined spaces or inside buildings, very often impossible.

BYGGWIK can supply a range of hydraulic equipment for lifting, lowering or moving horizontally, heavy or cumbersome items. This would include the moving of chimney liners, roof structures, pressure vessels and machinery.



The first section of a 200 ft. Chimney Liner
40 Tonnes

Southern Ireland

1 of 3
58 m. dia. Domed Gas holder roof.
Lifted 32m.

240 Tonnes

Southern Italy
Holland
U.K.



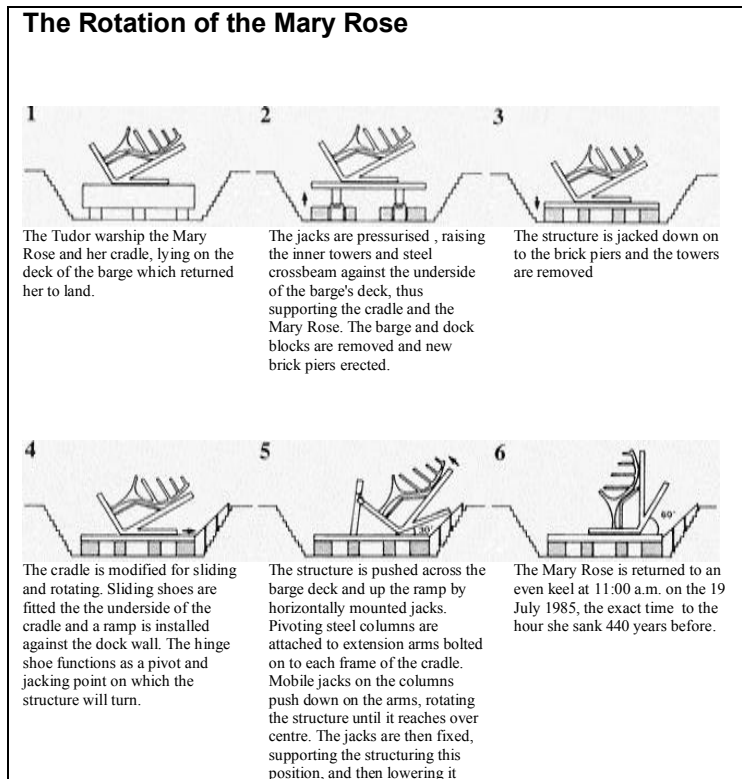
BYGGWIK (UK) LTD.

The procedure used by BYGGWIK to rotate the 'Mary Rose' into an upright position.

At 11.00 am on July 1985 the pride of Henry VIII's fleet, the Mary Rose, was returned to an even Keel — the exact time to the hour she sank 440 years before. Gentle handling was imperative for the success of the project.

THE MARY ROSE, once the pride of Henry VIII 's fleet, lies on her starboard side in the confines of a Victorian dry dock — her port side having eroded away during her 437 year sojourn in a muddy nest, 15 metres below the surface of the Solent. She is almost continuously sprayed with water to stop her falling apart as she rests within the steel arms of a cradle at an angle of 60 deg. to the vertical. The cradle, in-turn, rests upon the deck of the barge which returned her to her home port of Portsmouth in the winter of 1982.

The inadequacy of the barge as a long-term support prompted the Trust at this time not only to remove the barge and replace the dock blocks on which it stood with more permanent piers, but also to return the Mary Rose to an even keel. The latter project proved to be unique — as no comparable exercise had been undertaken, any proposal put forward would inevitably be prone to unforeseen complications. Heavy lifting specialists, BYGGWIK the company had been involved in the raising of the Mary Rose two years earlier.



Reprinted from *Storage Handling & Distribution*



During the sliding operation



10:45 19th July 1985



BYGGWIK (UK) LTD CONDITIONS OF HIRE

1. FORMATION OF CONTRACT

The hiring agreement shall come into effect upon receipt by the Owner of the written acceptance from the Hirer of the Owner's quotation, or, where earlier, upon the Hirer telephoning the Owner to confirm verbal acceptance of the quotation and in either event the conditions shall be incorporated into the Hiring Agreement and the Owner will not accept any variation unless previously agreed in writing with the Hirer.

2. INTERPRETATION

Owner means BYGGWIK UK Ltd or its successor in title.

Hirer means the person, firm or company to whom the equipment is hired and who will be responsible for the obligations of the Hirer hereinafter contained.

Equipment means all plant machinery and pumps and other ancillary items supplied by the Owner in accordance with the quotation.

Quotation means the written statement from the Owner to the Hirer howsoever delivered giving details of the periodic or total charge payable by the Hirer to the Owner for the use of the equipment together with other special terms and conditions relating to the hiring and where the terms of the quotation conflict with these conditions the terms of the quotation shall prevail.

Period of hire means the period commencing with the date on which the equipment is dispatched from the Owner's premises and ending on the date on which the equipment is returned to the Owner's premises.

The site means the site stated in the Owner's quotation to which the equipment will be sent unless the Owner has prior to the commencement of the hiring period agreed to an alternative site. The Hirer shall not move the equipment or any part of it to another site during the continuation of the hiring period without the prior written consent of the Owner.

3. TRANSPORT

The owner accepts no responsibility for delivering the equipment to the site or collecting equipment back from the site at the end of the hiring period. The owner will when so requested and when practicable arrange to deliver the equipment and to collect the equipment at the end of the hiring, but the Hirer shall be solely responsible for the cost of such transport and for any loss or damage to the equipment during such transport howsoever caused. The owner is under no liability for any loss occasioned to the Hirer or anyone else for late delivery or collection of the equipment.

4. RISK

- The Hirer shall be liable to the owner for any loss of or damage to the equipment during the period of hire and shall pay to the owner the full cost of replacing or repairing all lost or damaged equipment.
- If during the hiring there should be any stoppage or breakdown of any part of the equipment then (except where the breakdown or stoppage occurs through the negligence or default of the Hirer or any contractor or employee of the Hirer) the owner will at his own expense remedy the breakdown or stoppage or replace the defective part but the owner shall be under no liability to the Hirer for any loss occasioned to the Hirer or any third party by such breakdown or stoppage.
- The owner shall be under no liability for any loss or claim for damages by the Hirer or any other person arising either directly or indirectly from the use of the equipment during the hiring howsoever occasioned.
- The Hirer shall indemnify the owner against the full amount of any judgement against the owner in respect of any claim arising under the hiring whether in respect of loss or damage to the goods or property if the Hirer or any other person or in respect of personal injuries to any contractor or employee of the Hirer or any other person and such indemnity shall include the legal and other costs of the owner in defending such proceedings and of proceedings against the Hirer to enforce the indemnity herein contained.

5. MAINTENANCE

- In the event of any breakdown or failure of the equipment or any part thereof the Hirer shall immediately notify the owner of such breakdown or failure.
- Upon receipt of such notice the owner will:
 - attend at the site as soon as is practicable and repair the equipment or replace the defective part as necessary or
 - instruct the Hirer to obtain the services of an approved firm to carry out the necessary repair or replacement or accordance with any instructions in that behalf given by the owner.
 - replace the defective part or carry out the required adjustment in accordance with the owner's instructions provided that in respect of sub-paragraphs (ii) and (iii) of this condition all replacements shall be as supplied or specified by the owner.
- The Hirer shall pay to the owner compensation for any loss or damage to the owner occasioned by repair work to the equipment or from the use of spares or replacements other than as hereinbefore specified.
- The Hirer shall at all times allow the owner access to the site for the purpose of inspecting the state and condition of the equipment and the carrying out any necessary maintenance and for this purpose the Hirer shall be solely responsible for providing a safe place of work and (save where the owner's own employees are carrying out maintenance) for ensuring that all statutory requirements as to safe methods of work are complied with.

6. OPERATOR

- The equipment shall be operated by or on behalf of the Hirer exclusively at the Hirer's discretion and if the owner at the Hirer's request provides an operator to operate the equipment the operator shall carry out all lawful instructions of the Hirer in the operating of the equipment and shall for the purpose of these conditions be deemed to be exclusively under the control of the hire, provided that the Hirer in operating the equipment shall have due regard to the instructions and operator's manual as to the method of operation loading and all other matters relating to the equipment.
- The Hirer shall not –
 - use the equipment other than as stated in paragraph (a) of this condition and in particular shall not use the equipment in a manner other than as described in the operating manual either as to the manner of use or the type or weight of load to be lifted.
 - shall not allow the equipment to be used other than by employees authorised by it or by any other operator as defined by paragraph (a) of this condition
 - under no circumstances shall the equipment be lent or hired to another person, firm or company.

7. PAYMENT

The Hirer shall pay the hiring charges to the owner at the intervals and in the sums stated in the quotation and whenever the Hirer fails to make payment by the date stipulated in the quotation the Hirer shall be liable to pay the owner at the rate of five percent above the base lending rate charged by the owner's bank from time to time in respect of the period from the payment date set out in the quotation to the date of actual payment and such rate of interest shall continue to be paid after any judgement in any action by the owner for the recovery of unpaid hiring charges and the Hirer shall not be entitled to deduct or set off against the hiring charges the whole or any part of any actual or alleged claim, counter-claim or set-off between the Hirer and the owner or any of its employees or any person claiming through or on behalf of the Hirer.

8. CURRENCY

Where the quotation is in a currency other than sterling the amount payable shall be calculated by reference to the rate of exchange from that currency into sterling applicable at the date of the quotation.

9. DISPUTES

In the event of any dispute as to the performance of the contract of hiring or as to the meaning of any terms in the contract English Law shall be the proper law of the contract.

10. BREACH OF CONTRACT

- Any failure by the Hirer to observe the terms herein contained shall be deemed to be a breach of contract by the Hirer.
- If the Hirer moves or attempts to move or permit the movement of the equipment to a site other than that stipulated in the quotation or previously approved in writing by the owner or if the Hirer sells or hires or attempts to sell or hire the equipment to any person, firm or company, or permit any charge or lien to be taken over the equipment any of such acts shall constitute a breach of contract.
- Where ever a breach of contract occurs the owner may (where practicable) terminate the contract forthwith and arrange the removal of the equipment and its return to the owner's premises at the cost of the Hirer and the Hirer shall pay the owner any costs over and above the charges stipulated in the quotation incurred by the owner in consequence thereof and in all other cases the owner shall be entitled to recover from the Hirer by the way of damages the costs of recovering possession of the equipment and returning it to the owner's premises including the cost of discharging any charge or lien as appropriate and the cost of making good damage to the equipment or replacing damaged or irrecoverable equipment arising from the breach of contract defined in paragraph (a) of this condition.

11. TITLE

Title to the equipment and each and every part thereof shall at all times remain in the owner. This agreement shall only grant to the Hirer the right to use the equipment and shall not transfer to the Hirer any right of ownership in respect thereof and at no time shall the Hirer or any person claiming through or on behalf of the Hirer have any right whatever to deal with or charge or grant a lien over all or any part of the said equipment and in the event of the breach of this condition or of the Hirer becoming insolvent or any judgement being obtained against the Hirer than on each and every such occasion the Hirer shall afford access to the owner to allow the owner to remove the equipment in accordance with the provisions of the preceding condition and shall compensate the owner in respect of such breach as provided in the said preceding condition.