KROFTA SUPRACELL ASSEMBLY MANUAL
DOUBLE ROTARY JOINT TYPE

L-1525

KROFTA SUPRACELL

DOUBLE ROTARY JOINT TYPE

ASSEMBLY MANUAL

ASSEMBLY INSTRUCTIONS FOR THE KROFTA SUPRACELL USING THE FOLLOWING DRAWINGS MON 01 TO MON 11/A

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MON 02	FIXED CENTRAL PART
MON 03	LEVEL CONTROL ASSEMBLY
MON 03/A	LEVEL CONTROL SYSTEM
MON 03/B	OVERFLOW CONTROL DETAIL
MON 04	MOVABLE CENTRAL PART
MON 04/A	MOVABLE PART BOTTOM
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MON 04/D	MOVABLE PART SCRAPER AND GASKET LOCATIONS
MON 05	MOVABLE PART SUPPORT
MON 05/A	CENTERING WHEELS
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MON 05/C	DRIVE WHEEL
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The following pages contain explanations and drawings needed to assemble the **KROFTA SUPRACELL**. Before starting make sure that the surface on which the unit will be placed is level.

1st ASSEMBLY OPERATION - DWG. MON 01 - FLOTATION TANK

* The central part(s) of the Tank **(ITEM 1)** is placed with piping connections oriented according to the Certified for Construction drawings previously received. Position the end tank pieces paying specific attention to the right/left location markings.
* All bolts must be loosely fitted leaving 1/8"-1/4" of space between the tank pieces. Caulk thoroughly with silicone on the inside of the tank joint then tighten all the bolts before the silicone has cured. The excess silicone that comes out of the joint(s) must be removed.

2nd ASSEMBLY OPERATION - DWG. MON 02 - FIXED CENTRAL PART

* The Fixed Central Part **(ITEM 5)** is either bolted **(ITEM 1)** or pre-welded to the bottom of the main tank depending on the joint locations of the Supracell unit. Make sure to check the Certified for Construction drawings for the correct position of the pipe **(ITEM 3)** before beginning the bolting process.
* **IF BOLTED:** Place the fixed central part onto the stud bolts. Underneath the fixed central part place 3 to 4 small spacers of 3/16" thickness. Put silicone in the space created by the spacers, then remove the spacers, and tighten the fixed central part in place using the proper nuts. **NOTE:** It is important that the silicone is spread over the entire flange, in order to avoid leaks through the bolt holes.
* If not pre-attached, install the Inlet Elbow (ITEM 4) as shown rotating it to the correct orientation.

3rd ASSEMBLY OPERATION - DWG. MON 03, 03/A, 03/B, - LEVEL CONTROL ASSEMBLY

* The Level Control ring is to be mounted following the instructions given for the Fixed Central Part. Look for an indication mark as a reference to help position the level control ring in the tank.
* **IF BOLTED:** The Stud Bolts **(ITEM 2)** should already be in place. Place the spacers, caulk with silicone, remove the spacers, and tighten the nuts, as detailed for the Fixed Central part.
* The rubber seal **(MON 03/A, ITEM 4)** must be lubricated with a neoprene compatible grease for the inner ring to move smoothly.
* The level control driving parts should be attached to the inner ring as shown. Check that all indicated parts are properly mounted as shown.

4TH ASSEMBLY OPERATION - DWG. MON 04, 04/A, 04/B, 04/C, 04/D MOVABLE PART ASSEMBLY

* The Movable Central Part **(MON 04, 04/A)** may require preassembly. Seal joints with silicone as previously described.
* The Bottom Scraper **(MON 04/B)** the Clarified Water Gasket Ring **(MON 04/C)** are now to be attached at locations shown **(MON 04/D).**
* Position the assembly into place in the main tank onto shims.

5th ASSEMBLY OPERATION - DWG. MON 05, 05/A, 05/B, 05/C, - MOVABLE PART SUPPORT ASSEMBLY

* The Movable Part Support **(MON 05)** may require preassembly. The inside support wheel(s) and outside support wheel **(MON 05/B)** should be attached. Also the drive wheel **(MON 05/C)** should be attached.
* Install the support assembly into place over the movable part attaching to the support rods **(ITEM 2, MON 05).** Check that the movable part is level and adjust if necessary. The position of the rubber wipers should be checked during adjustment.
* Measure the radius of the movable part from the center pipe in order to center the part correctly. Install and adjust the centering wheels **(MON 05/A)** to bear on the Fixed Central Part tank rim.
* Rotate and check the centering of the movable part again, re-center if necessary and fix into position permanently.
* The two variable speed units can now be mounted.
* The support bearings and chain must be properly lubricated.
* Care must be taken that the Drive Wheel **(MON 05/C)** is properly aligned to track smoothly. The drive wheel shaft must precisely align with the center of the Supracell unit.

5th ASSEMBLY OPERATION - CONTINUED

If a tapered drive wheel is provided, a shim under one bearing is provided to give the proper angle to the drive wheel.

6th ASSEMBLY OPERATION - DWG. MON 06 - DISTRIBUTION INLET TUBE.

* The distribution tube **(ITEM 2)** is connected at one or more brackets to the Movable Part Support as shown.
* Handwheels **(ITEM 3)** adjust the water flow through each of the small outlet pipes. Make sure that they are in an open position of one to two inches.

7th ASSEMBLY OPERATION - DWG. MON 07, 07/A - SPIRAL SCOOP ASSEMBLY

* Assemble the scoop support wheels **(MON 07/A, ITEM 1)** on the bracket provided on the Movable Part and mount with bolts.
* Assemble the Sprocket **(ITEM 2)** and the Bearing Support **(ITEM 3)** to the spiral scoop.
* Lift the assembly by a crane if necessary and place it in the proper position. It will lie with the Bearing Support on the inside of the Movable Part girder, and on the Scoop Support Wheels.
* Mount the support to the outside frame with bolts **(ITEM 5)**. The spiral scoop is then fixed into its position.
* Check that the spiral scoop can turn easily.
* When the lower edge of the spiral scoop is placed in the perpendicular position the edge is parallel with the tank bottom. If not the Front Support Wheels **(ITEM 1)** have to be adjusted side to side on the slotted brackets until the proper height is achieved. These wheels have to turn easily and must be positioned according to the spiral scoop angle.
* The Driving Chain and the Bearing Support are then assembled and greased.

8th ASSEMBLY OPERATION - MON 08, 08/A, 08/B - ROTARY JOINT ASSEMBLY - DOUBLE TYPE

* The Rotary Joint **(MON 08, 08/A, ITEM 1)** must be assembled on the Central Feeding Pipe as follows:
* Lay the Teflon Gasket **(ITEM 2)** on the flange of the Main Inlet Pipe, then put Ring **(ITEM 3)** in place making sure the drill holes line up.
* Pre-install the Packing Compression Ring **(ITEM 5)** over the bottom end of the Rotary Joint **(ITEM 1)**. Then lower it onto the Teflon Gasket **(ITEM 2)**.

8th ASSEMBLY OPERATION -CONTINUED

Install the **three** layers of Packing **(ITEM 4)** as shown, carefully cutting each layer so that the ends meet together without a gap. Position each of the **three** layers so that the cut joints are 120 degrees apart. Lower Ring **(Item 5)** into the groove over the **three** Packings **(ITEM 4)**. Attach Ring **(ITEM 6, in two pieces)** over the packing assembly and bolt in place with Bolts **(ITEM 7)**.

* Gentle tightening of the screws **(ITEM 8)** provides adjustable compression of the packing. Lock in place with the nuts provided after adjusting.
* The Rotary Joint is provided with a 1/4" pipe connection for a remote grease line **(ITEM 9)**.
* The rotary joint is positioned to allow connection to the distribution inlet tube. They are linked by a Rubber pipe coupling **(MON 08/B, ITEM 11)** which is inserted between the ends when they are approximately 2 inches apart. This connection will be locked in place with Clamps **(ITEM 10)**.
* Drawing **(MON 08/C)** shows the Pressurized Water Rotary Joint inside the Main Rotary Joint. The Pressurized Water Rotary Joint is fed from the Air Dissolving Tube located outside the Supracell unit.
  Attach the rubber expansion joint **(ITEM 15)** to the Fixed Central Part pipe and to the pipe **(ITEM 20)** as shown. Make sure that this assembly is precisely centered within the Main Rotary Joint.
* The bronze bearing ring with internal O-rings **(ITEMS 22-24)** should be attached to the cover **(ITEM 21)**.
* Attach the cover with gasket to the top of the rotary joint, carefully pressing over the pipe **(ITEM 20)**.
* Attach pipe elbow **(ITEM 29)** with its gasket as shown.

9th ASSEMBLY OPERATION - MON 09, 09/A - DISTRIBUTION ASSEMBLY

* Place the Distribution Rake **(ITEM 1)** into position as shown. Its height is controlled by a gear and rack or gearbox adjustment system allowing for adjust from outside the Supracell unit.

10th ASSEMBLY OPERATION - MON 10, 10/A - CLARIFIED WATER PIPE ASSEMBLY

* The Clarified Water Extraction Pipes **(ITEM 1)** must be connected to their proper flange positions on the Movable Part Ring, attaching them with bolts **(ITEM 2)**.
* **NOTE:** The openings of the pipes must be turned towards the bottom of the tank.
* **NOTE:** The end of **(ITEM 1)** must be supported with a temporary support, in order to prevent stress on the pipe.
* Assemble the Wheels **(ITEM 4)** and the Threaded Rods **(ITEM 5)** to the Support Girders **(ITEM 3)**.

10th ASSEMBLY OPERATION - CONTINUED

* Lower the girders onto the tank by a crane if necessary and mount them to the movable part at Connection **(ITEM 6)**.
* Adjust the height of the pipes with the nuts **(ITEM 8)**.
* The Support Girders **(ITEM 3)** must be connected to the support girder of the movable part, by means of the brackets **(ITEM 9)**.

11th ASSEMBLY OPERATION - MON 11, 11/A - PRESSURIZED WATER RELEASE PIPE ASSEMBLY

* The pressurized pipe system connects to the Rotary joint assembly with a rubber expansion joint as shown (MON 11).
* Brackets on the Movable Part Support frame support the piping as shown
* Expansion joint(s) **(ITEM 3)** in line with butterfly control valves **(ITEMS 4 & 5)** connect to the Pressure Release Pipes **(ITEM 8)** which are to be attached to the Movable Part Bottom with bolts **(ITEM 6)**.
* The Pressure Release Pipes **(MON 11/A, ITEM 9)** are set to incline approx. 3/4" towards the center of the Supracell unit. The hood **(ITEM 8)** is attached with screws **(ITEM 7)**.
* Pressurized water flow adjustment is obtained by adjusting the position of lever **(ITEM 10)** and bolting it in place.
* If pressurized water flow becomes uneven, the lever **(ITEM 10)** should be moved back and forth several times to clear any blockage of the release holes.

KROFTA SUPRACELL
TANK ASSEMBLY

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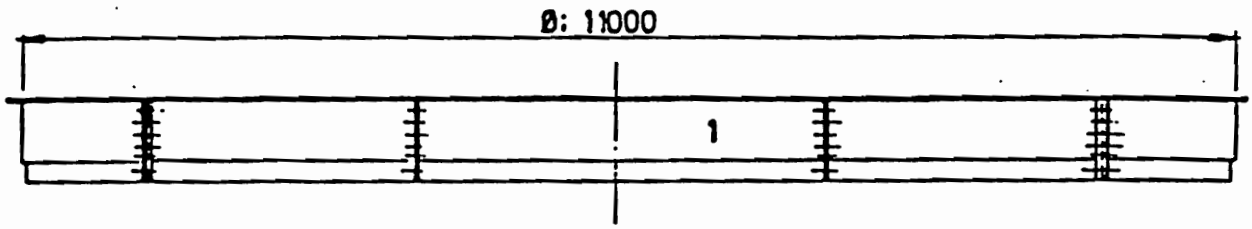

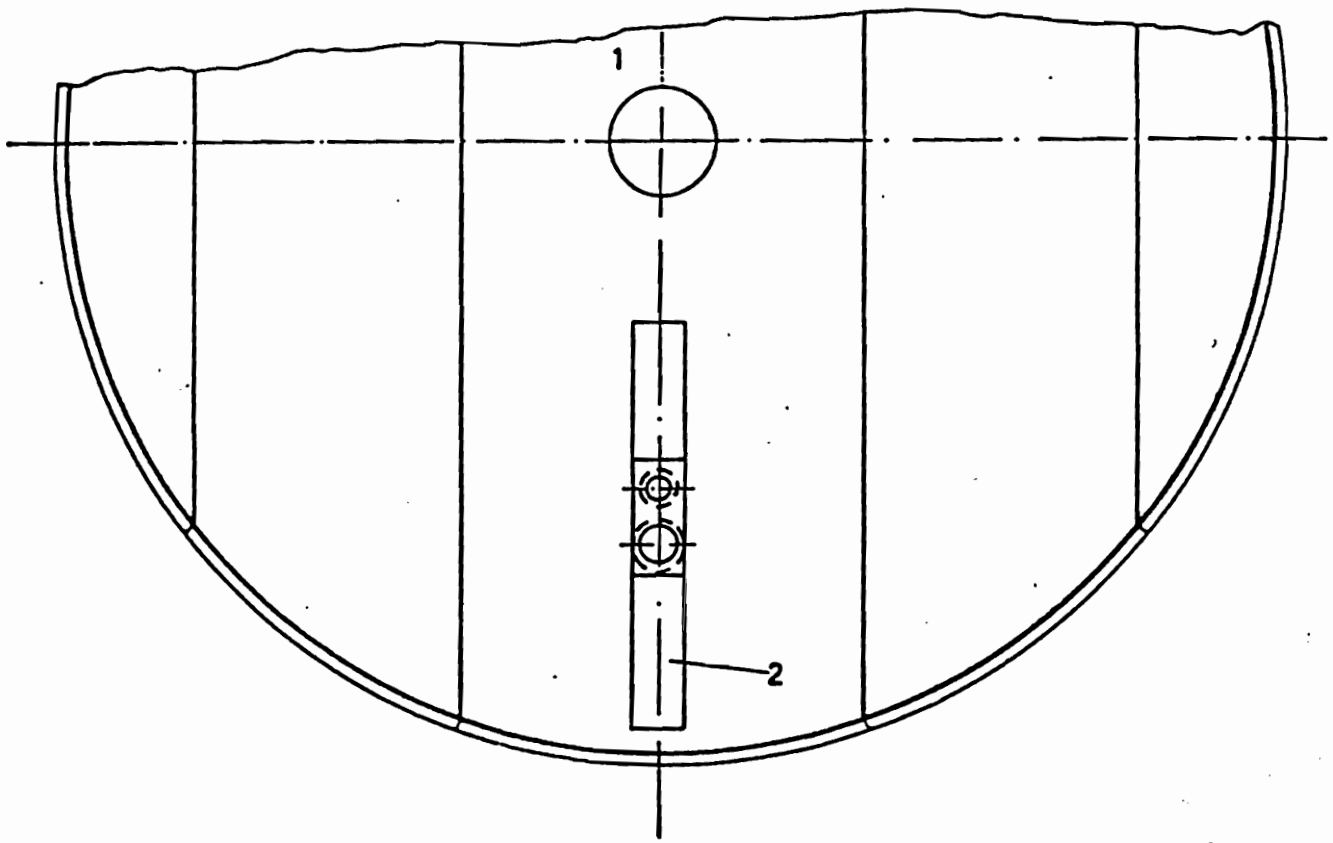

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MON 01

KROFTA SUPRACELL
FIXED CENTRAL PART

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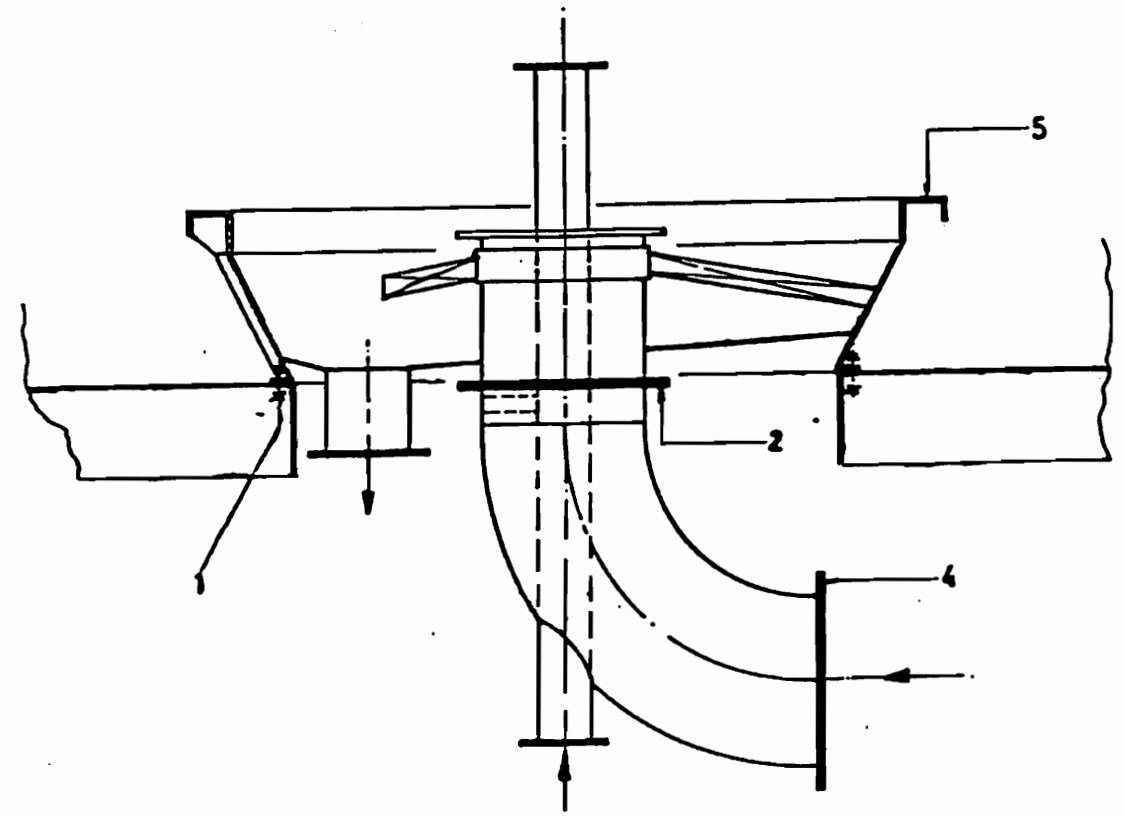

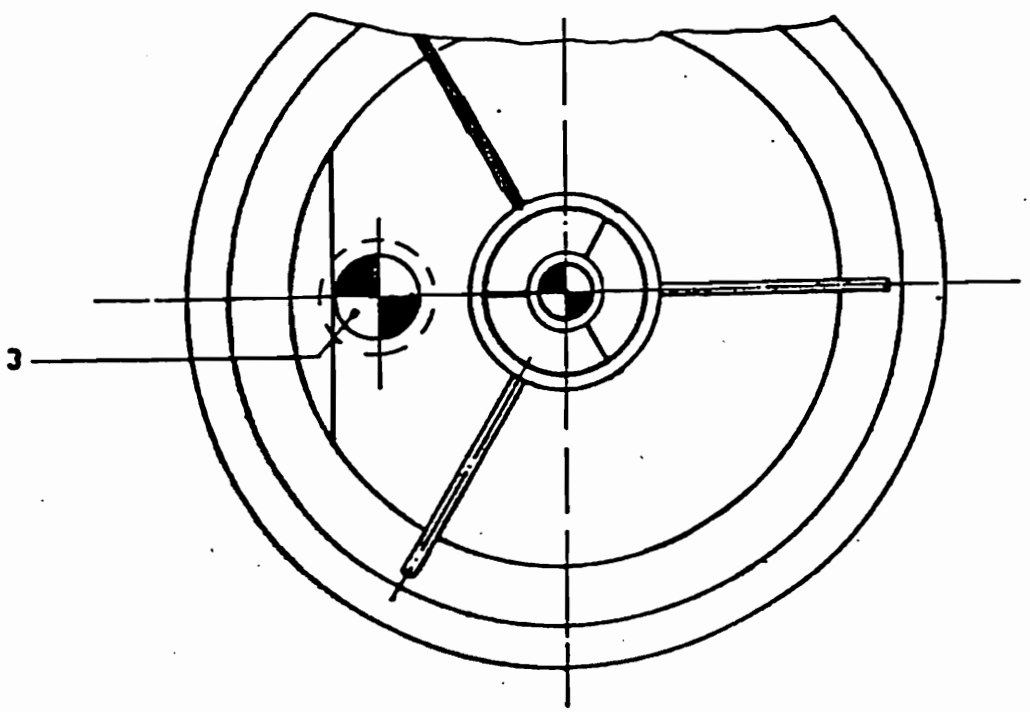

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MON 02

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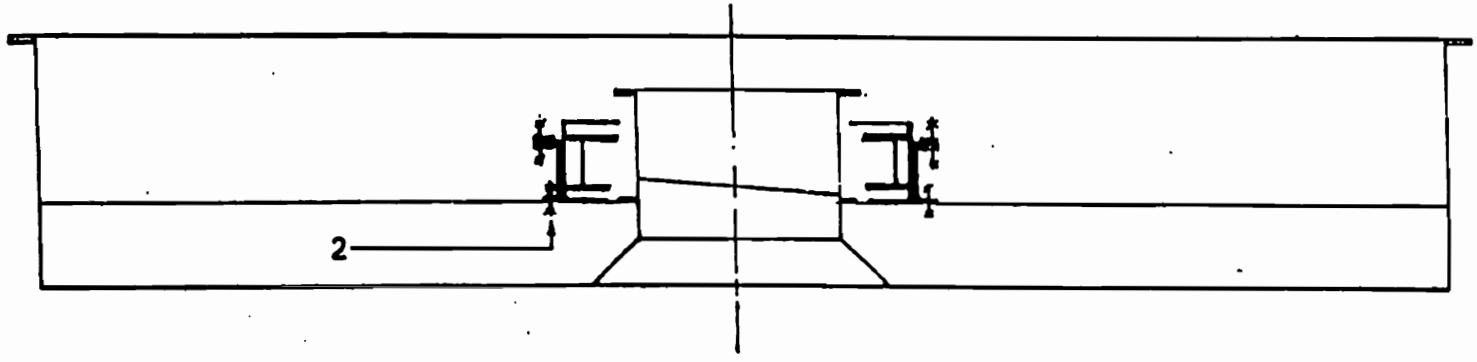
KROFTA SUPRACELL
LEVEL CONTROL ASSEMBLY



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MON 03

KROFTA SUPRACELL
LEVEL CONTROL SYSTEM

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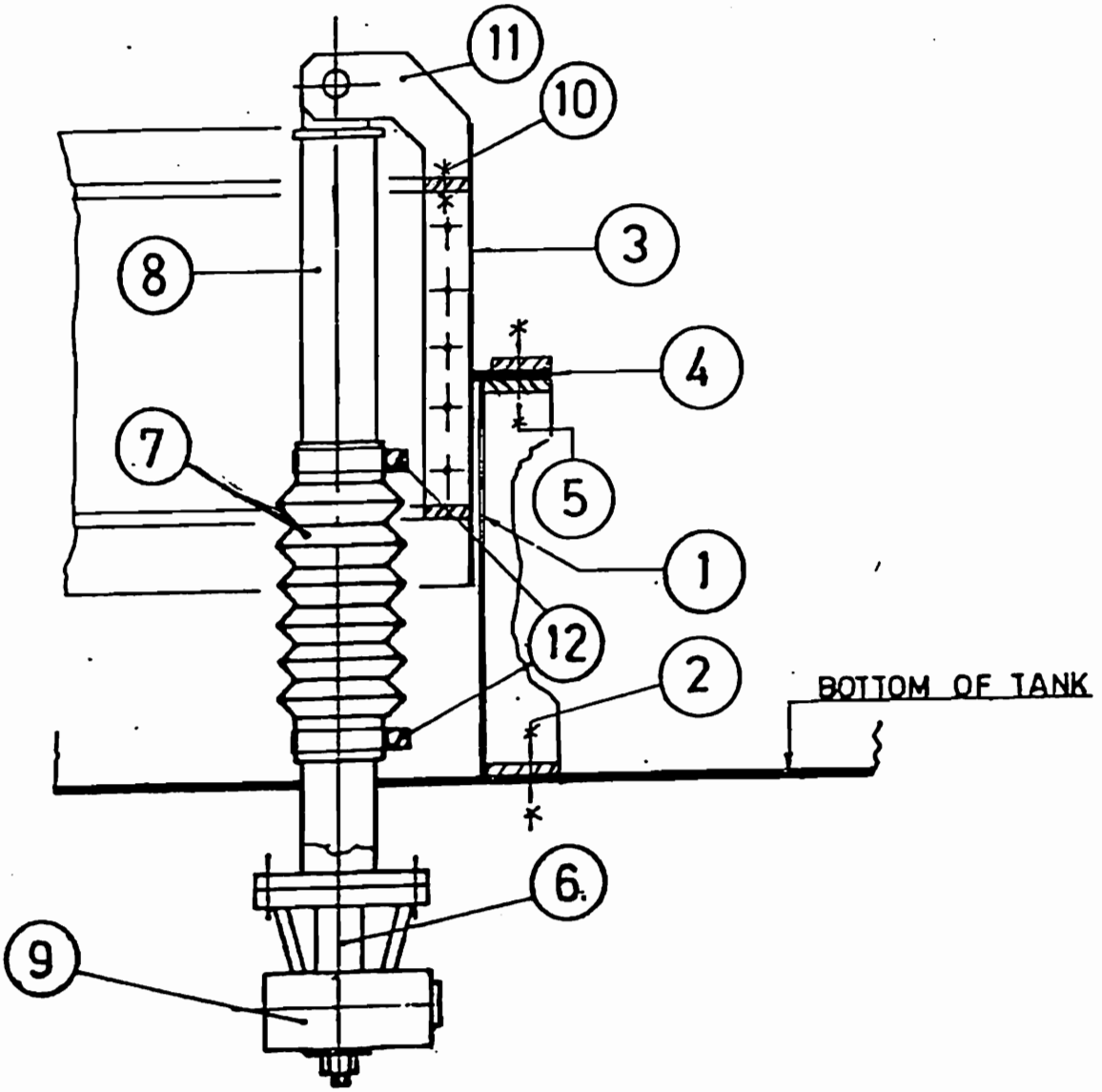

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MON 03/A

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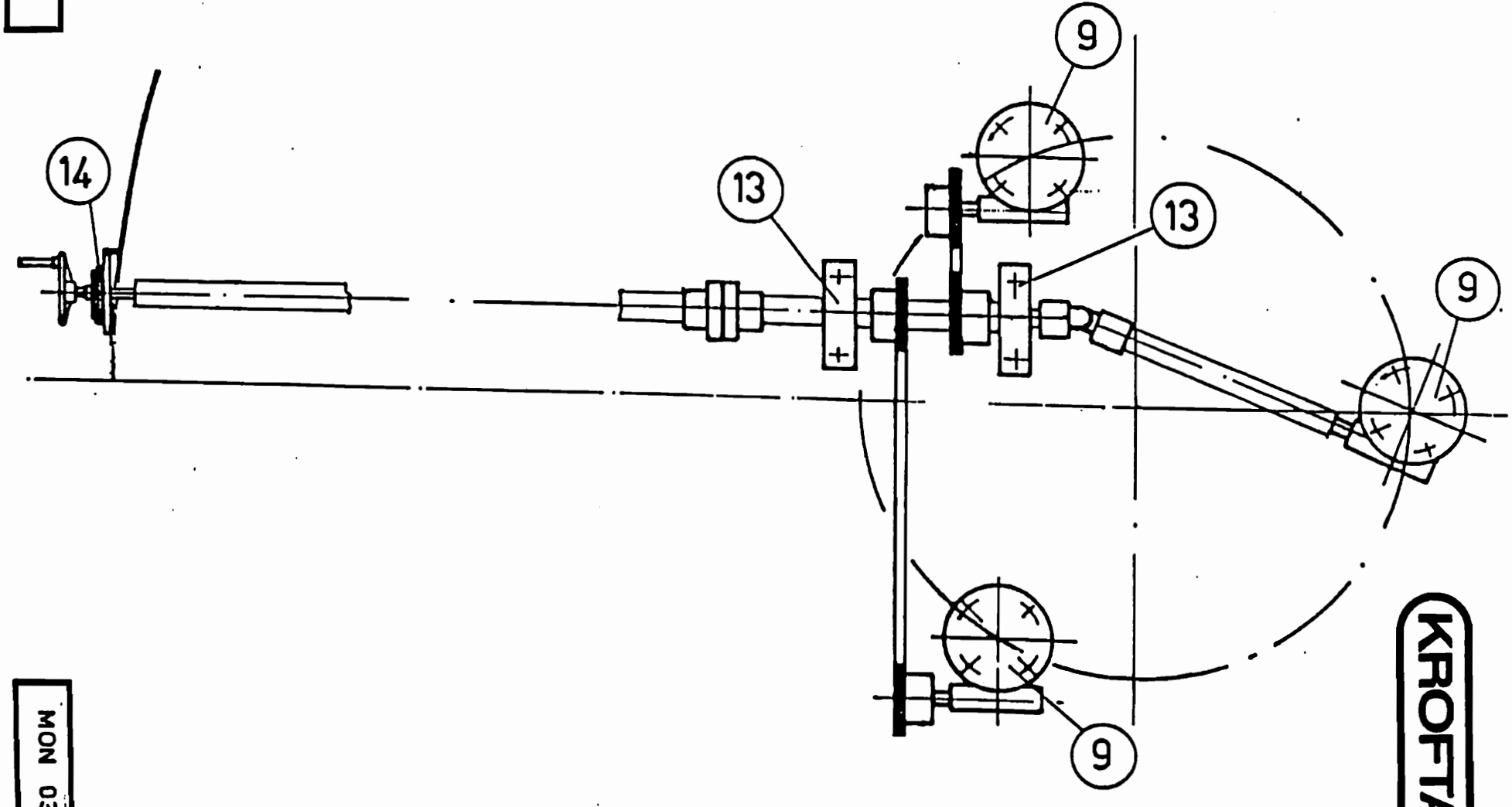
KROFTA SUPRACELL

OVERFLOW CONTROL DETAIL



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MON 03/8

KROFTA SUPRACELL

MOVABLE CENTRAL PART

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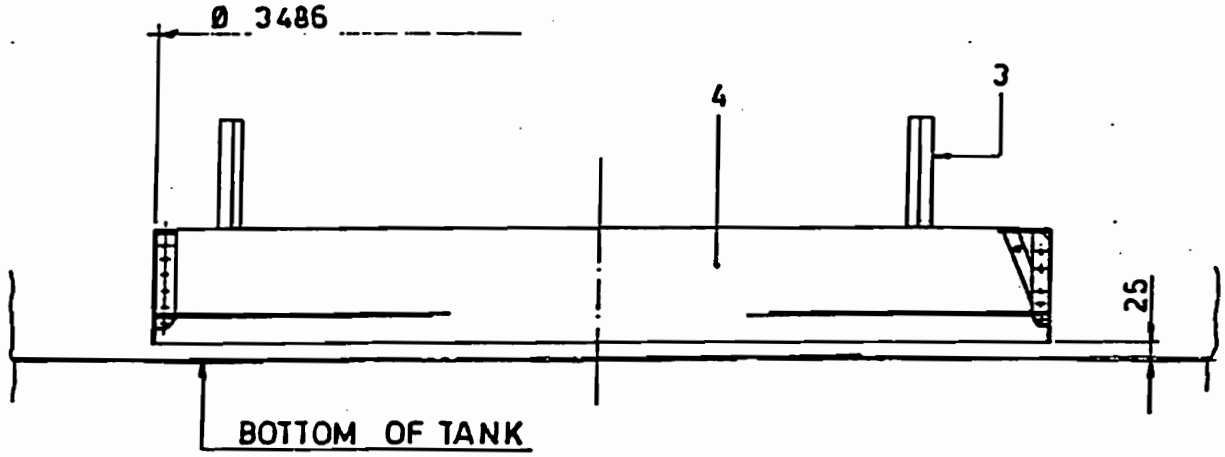

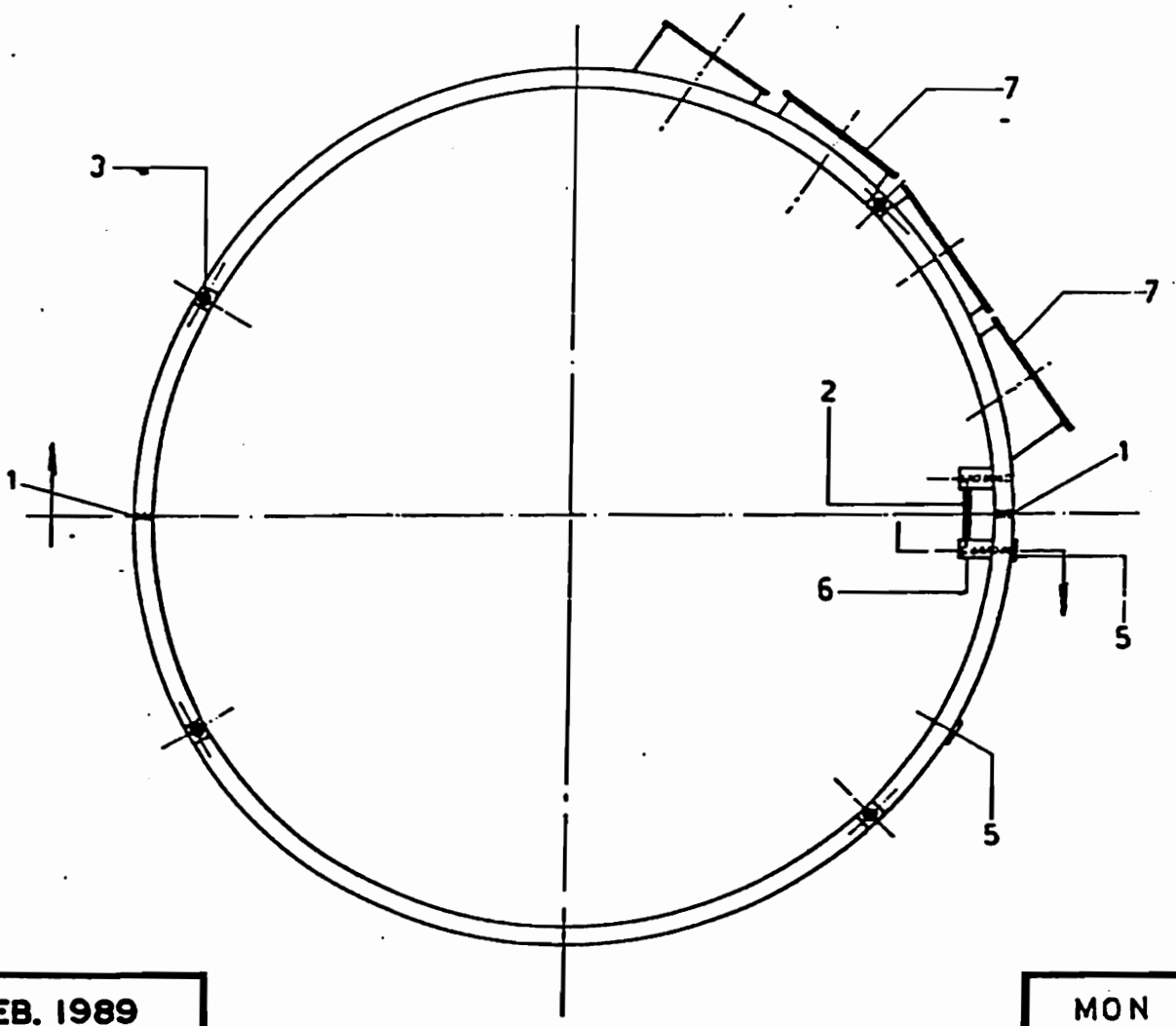

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MON 04

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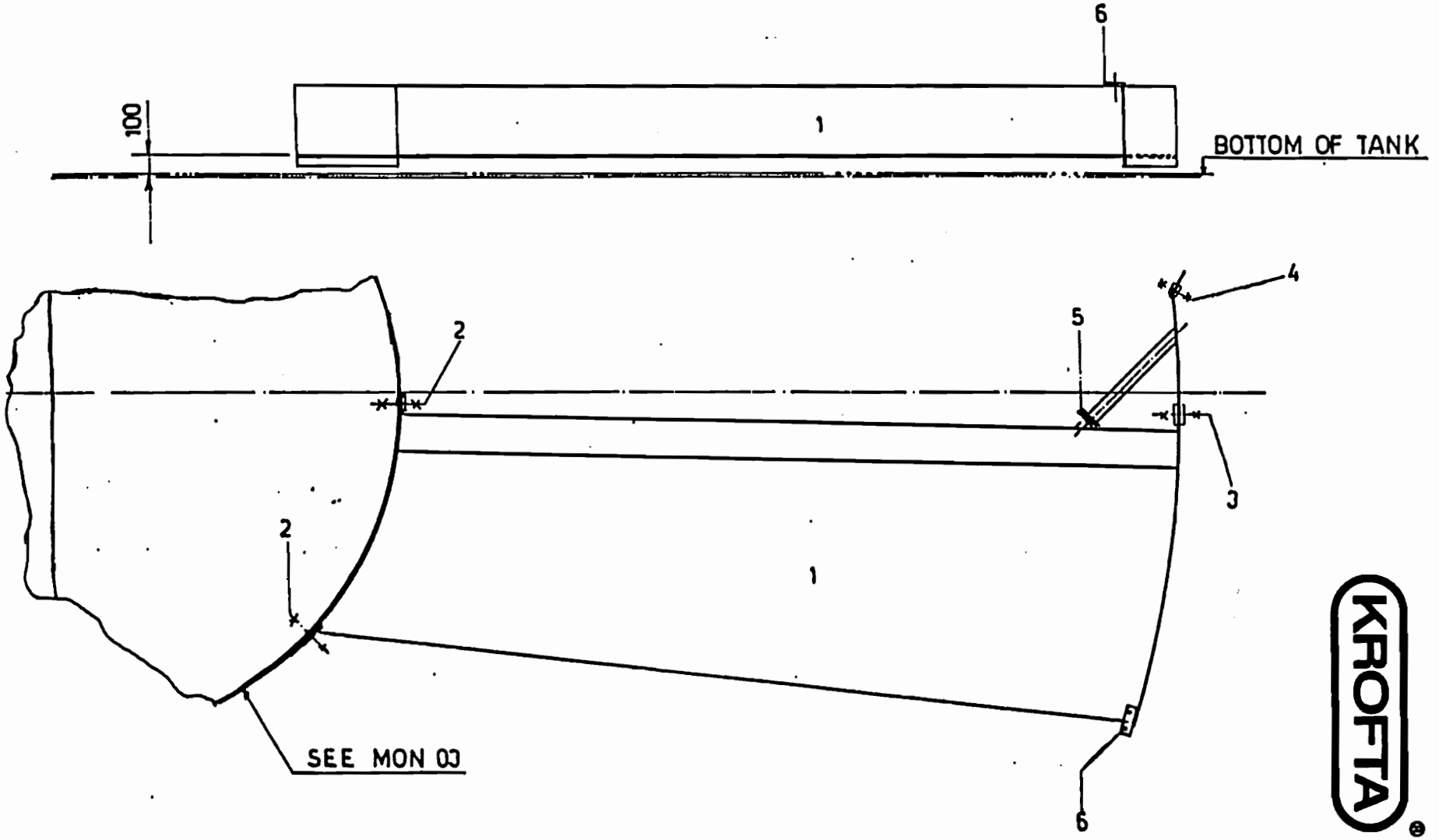
KROFTA SUPRACELL
MOVABLE PART BOTTOM



MON 04/A

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KROFTA SUPRACELL
BOTTOM SCRAPER

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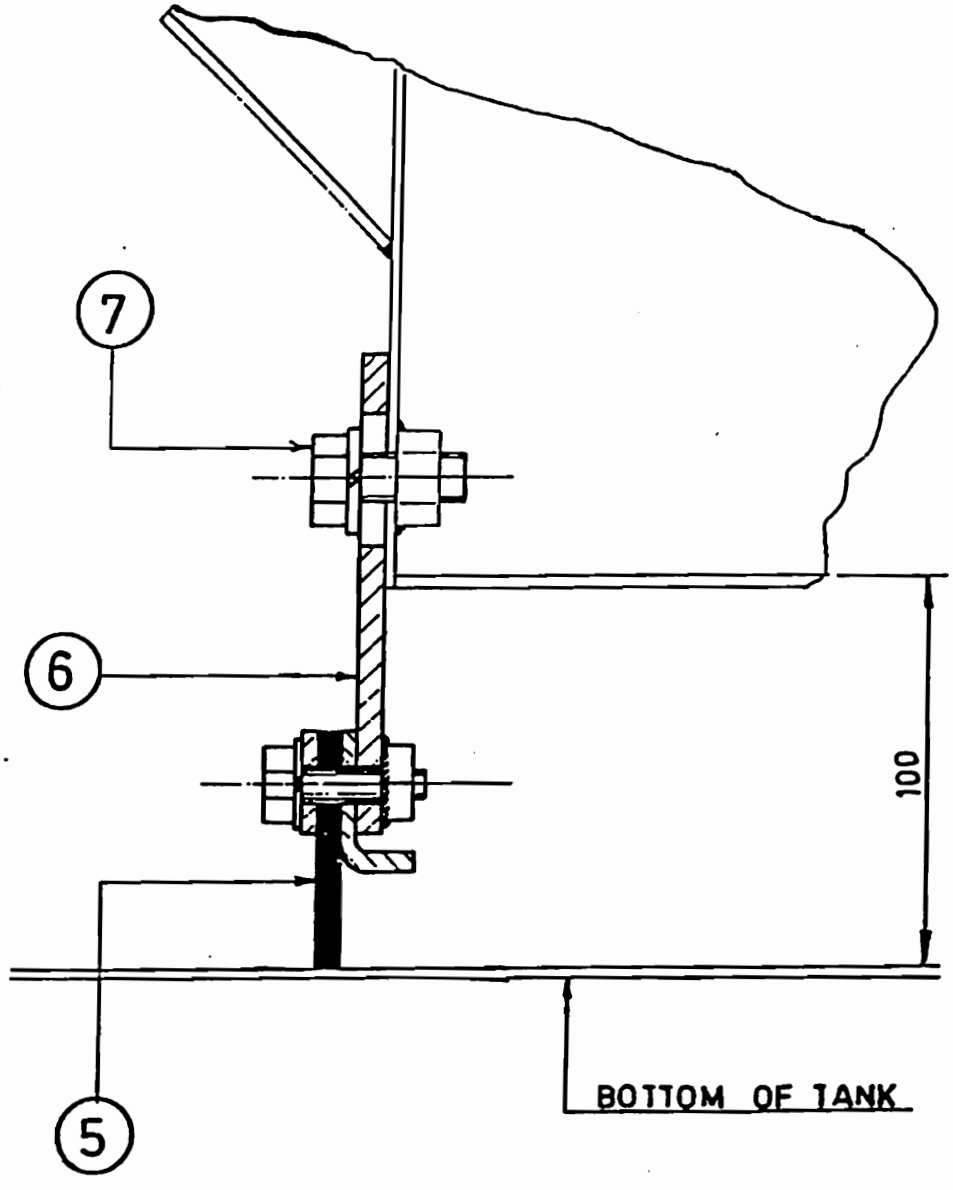

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MON 04/B

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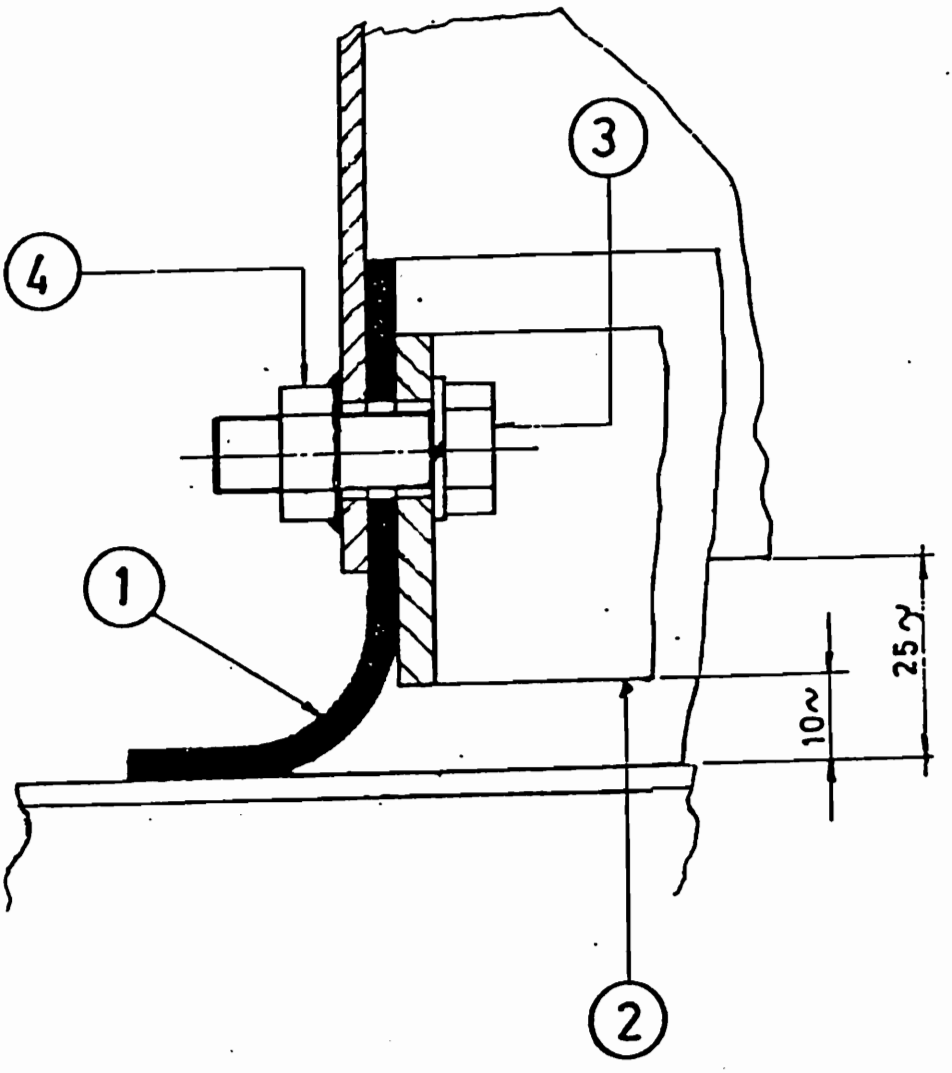
KROFTA SUPRACELL
GASKET OF MOVABLE PART



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MON 04/C

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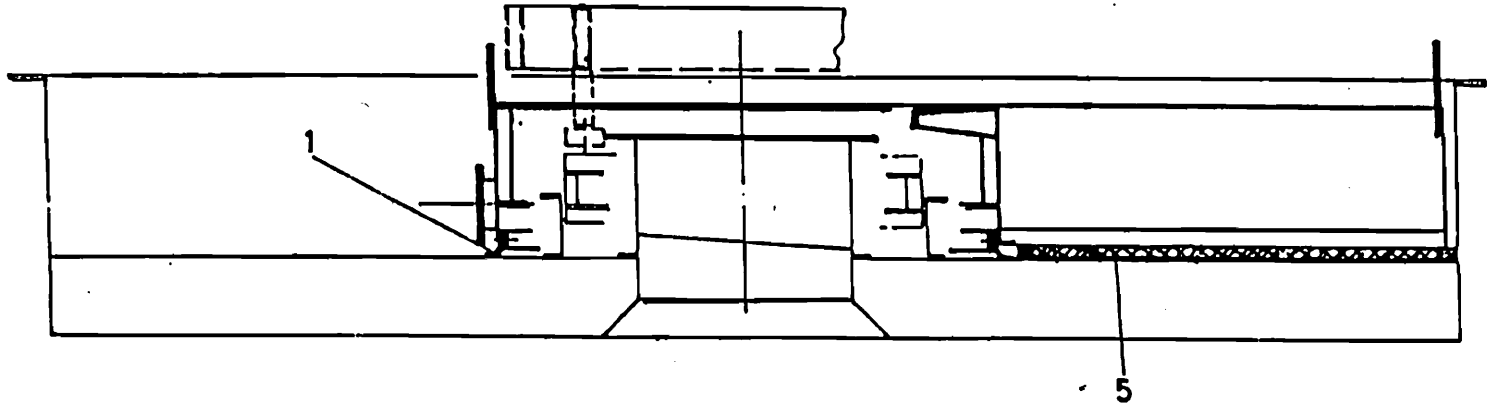
KROFTA SUPRACELL

MOVABLE PART SCRAPER AND BOTTOM GASKET DETAILS



MON 04/10

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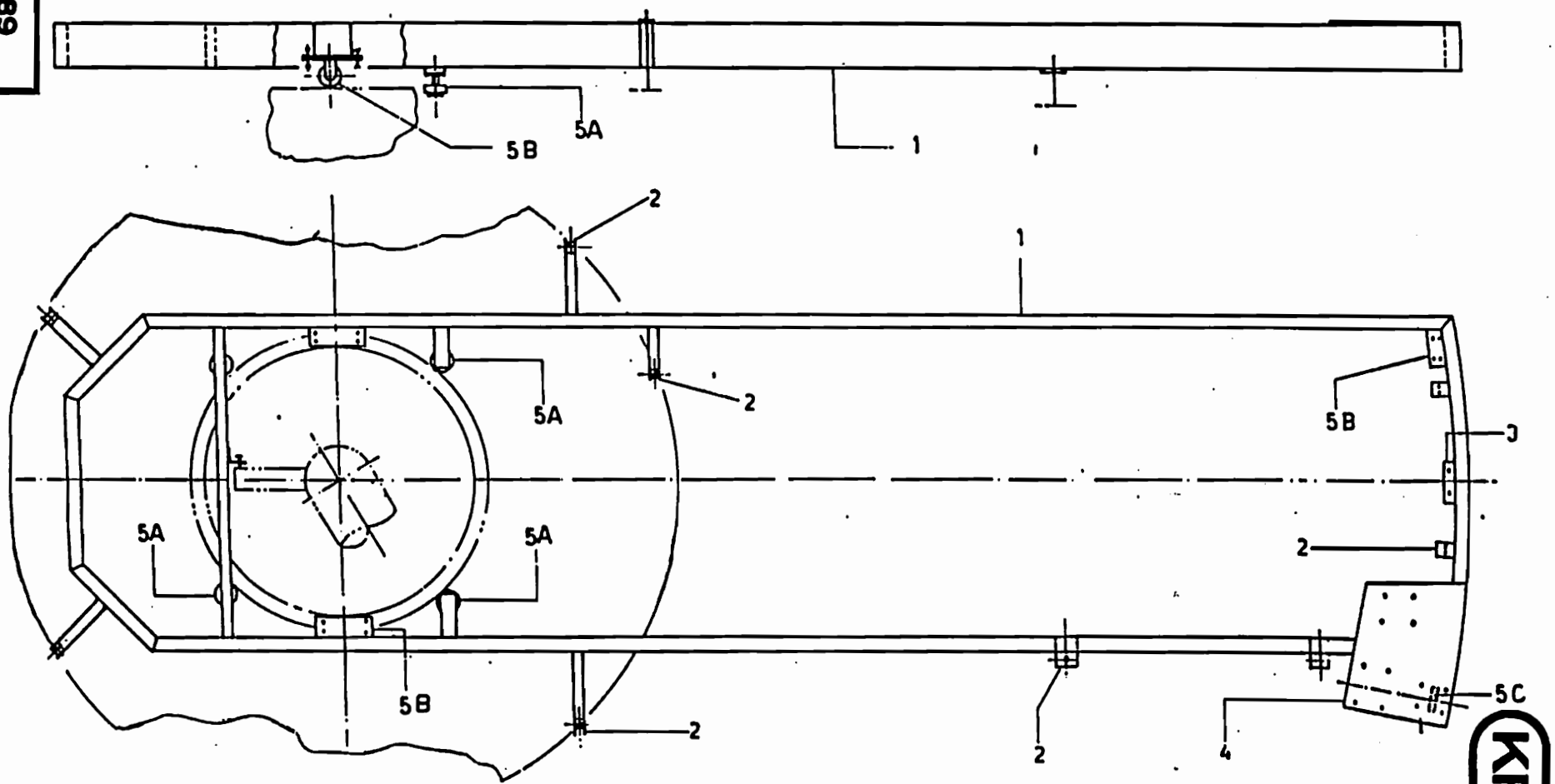
KROFTA SUPRACELL
MOVABLE PART SUPPORT



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MON 05

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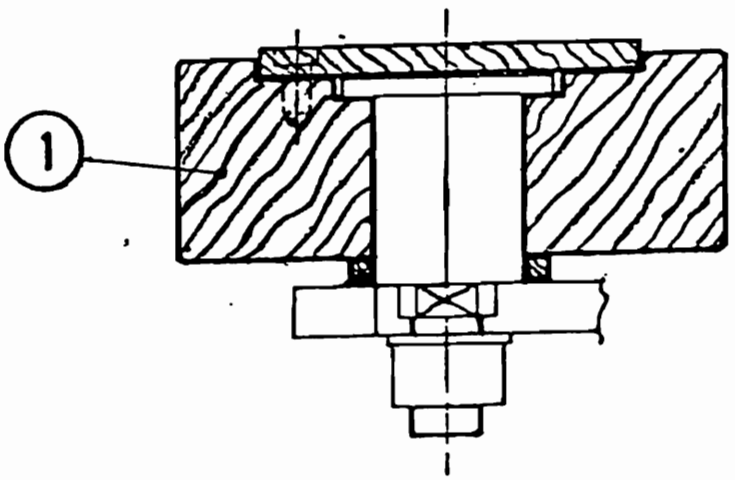
KROFTA SUPRACELL
CENTERING WHEELS



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MON 05/A

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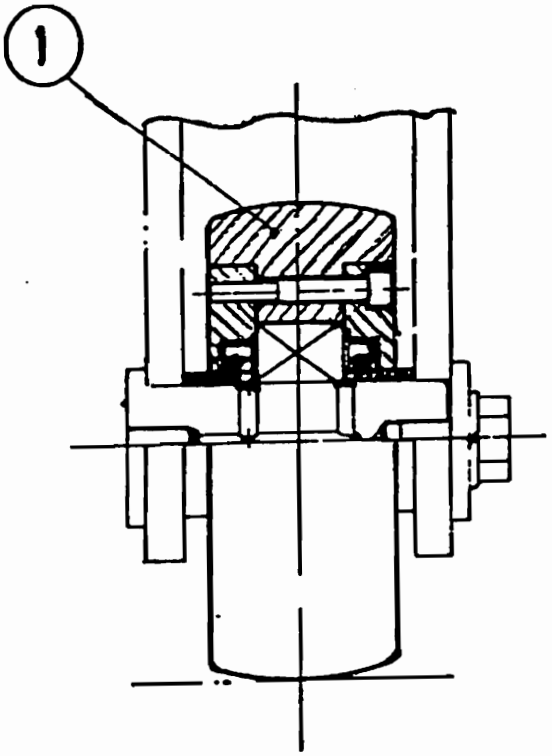
KROFTA SUPRACELL

CENTRAL AND EXTERNAL SUPPORT WHEELS OF MOVABLE PART



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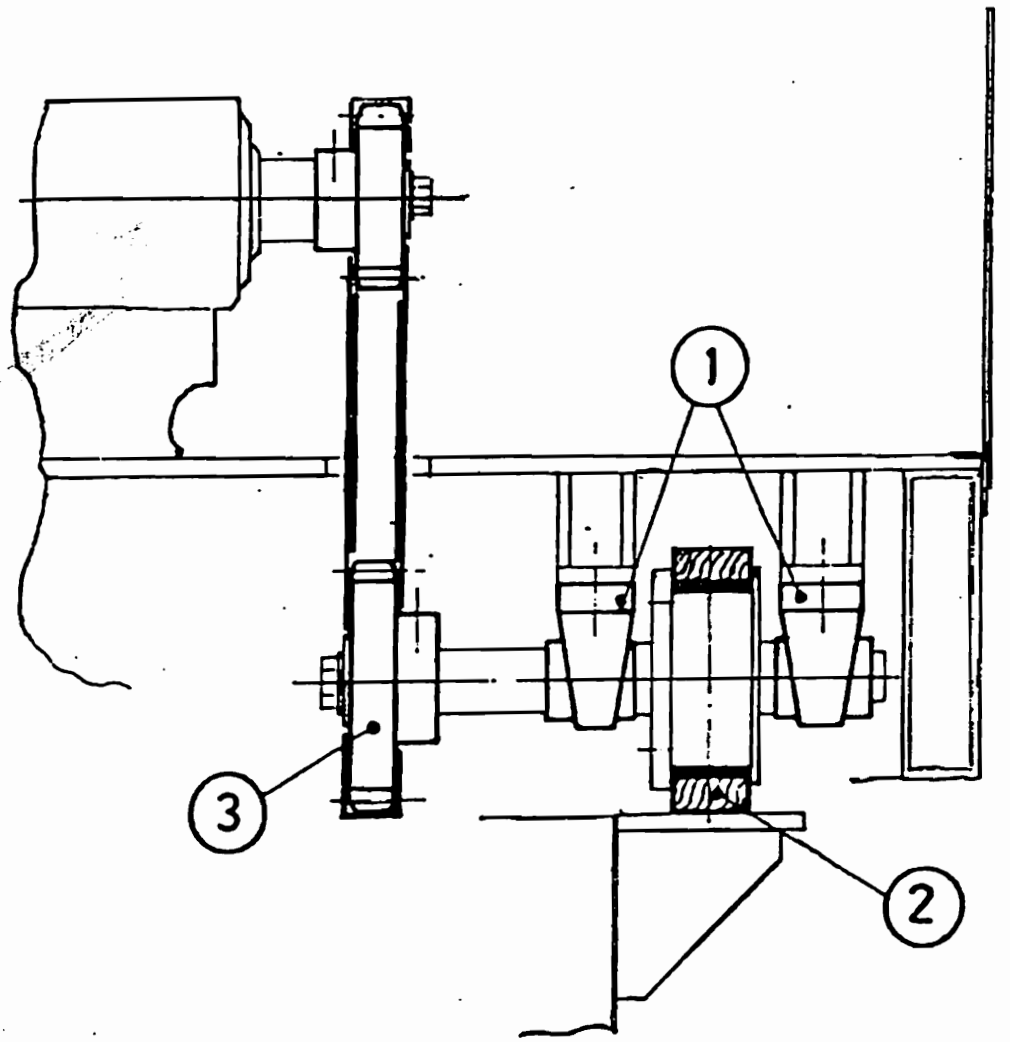
KROFTA SUPRACELL
DRIVE WHEEL



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MON 05/C

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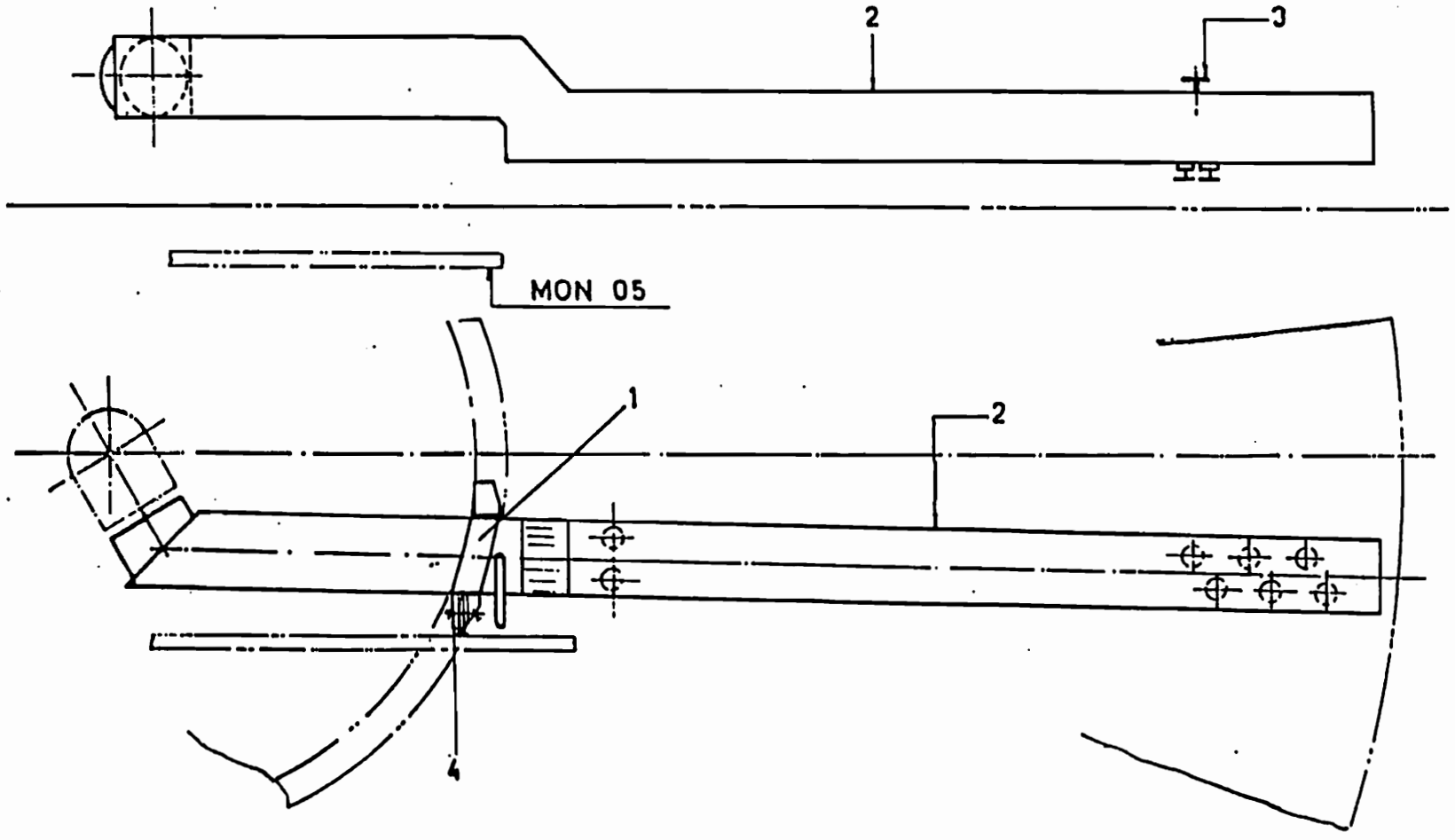
KROFTA SUPRACELL
DISTRIBUTION INLET TUBE



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MON 06

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KROFTA SUPRACELL
SPIRAL SCOOP ASSEMBLY

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MON 07

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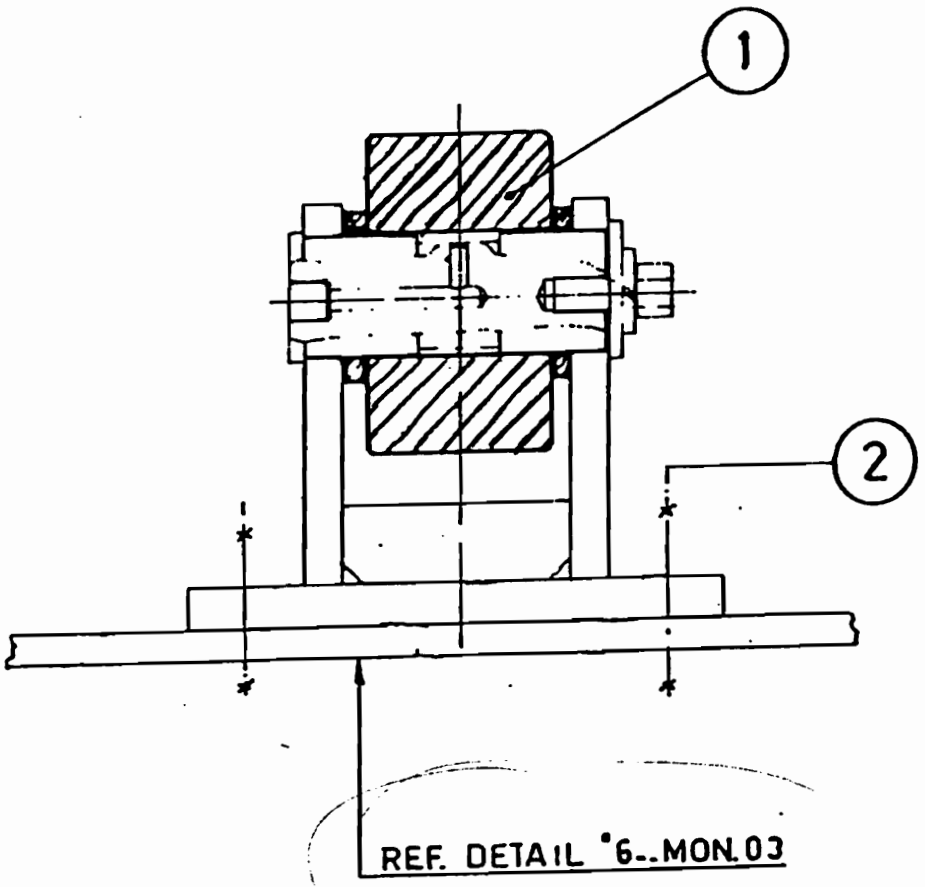
KROFTA SUPRACELL
SPIRAL SCOOP SUPPORT WHEELS



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MON 07/A

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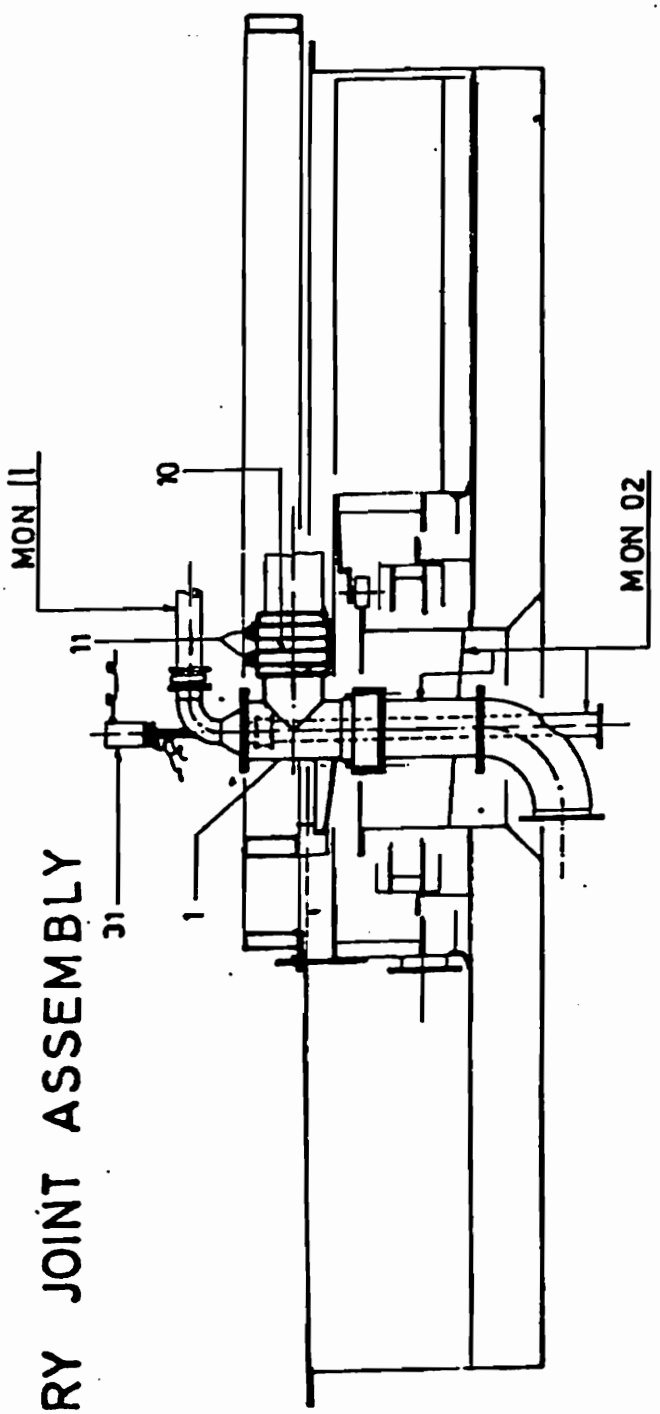
KROFTA SUPRACELL

ROTARY JOINT ASSEMBLY



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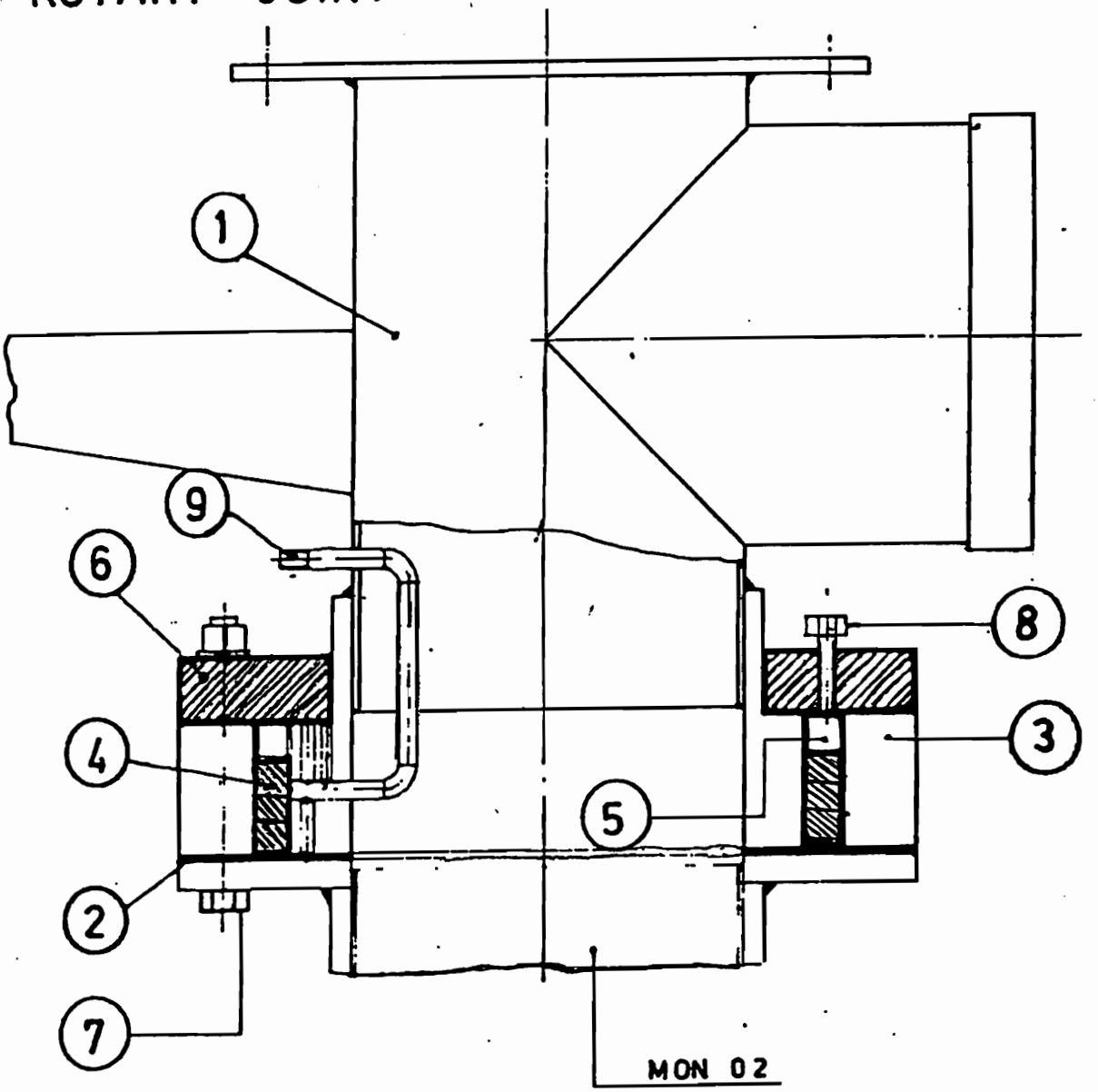
MON 08

KROFTA SUPRACELL

ROTARY JOINT

KROFTA



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MON 08/A

KROFTA SUPRACELL

ELASTIC JOINT

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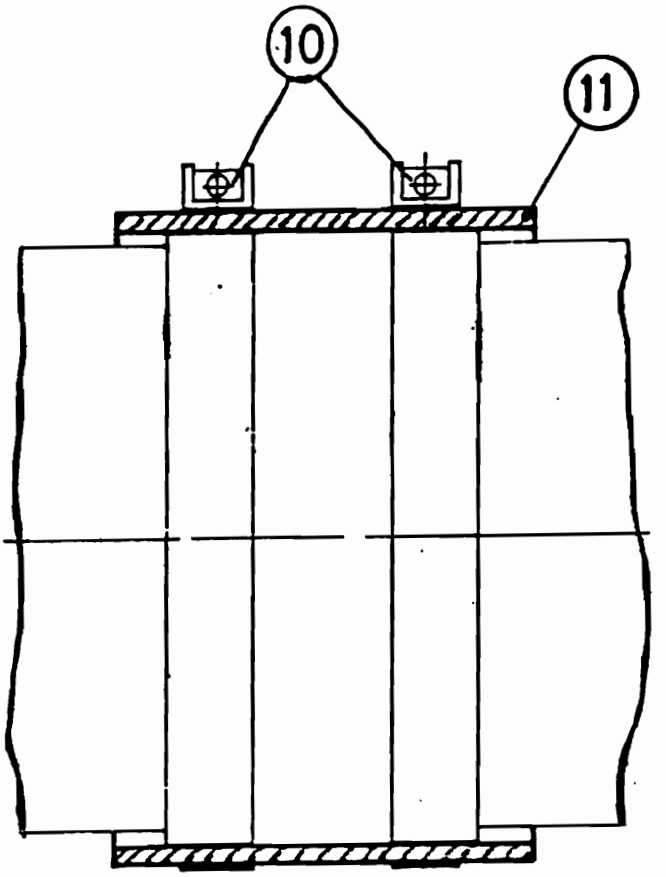

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MON 08/B

KROFTA SUPRACELL

ROTARY JOINT DETAILS

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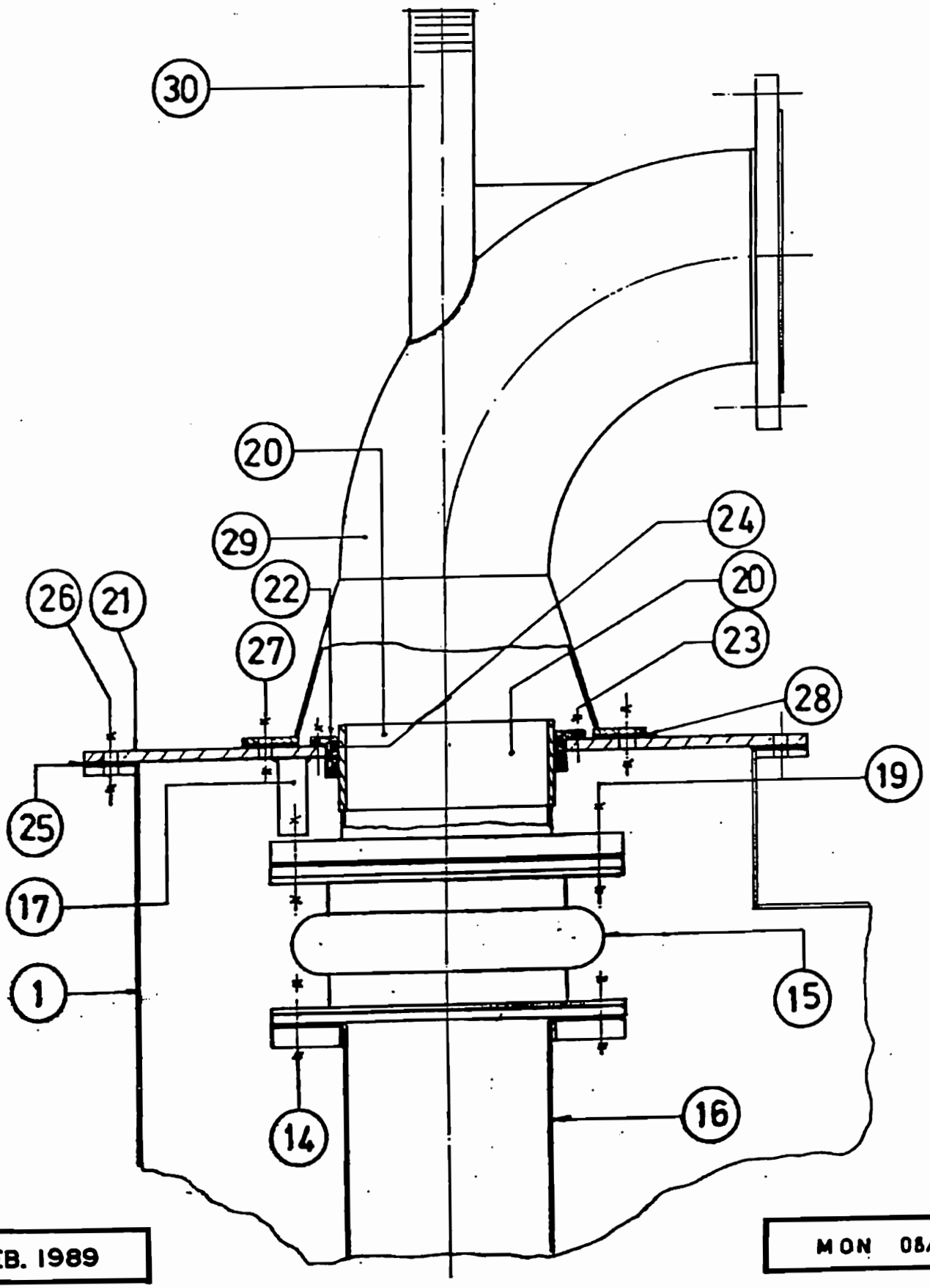

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MON 08/C

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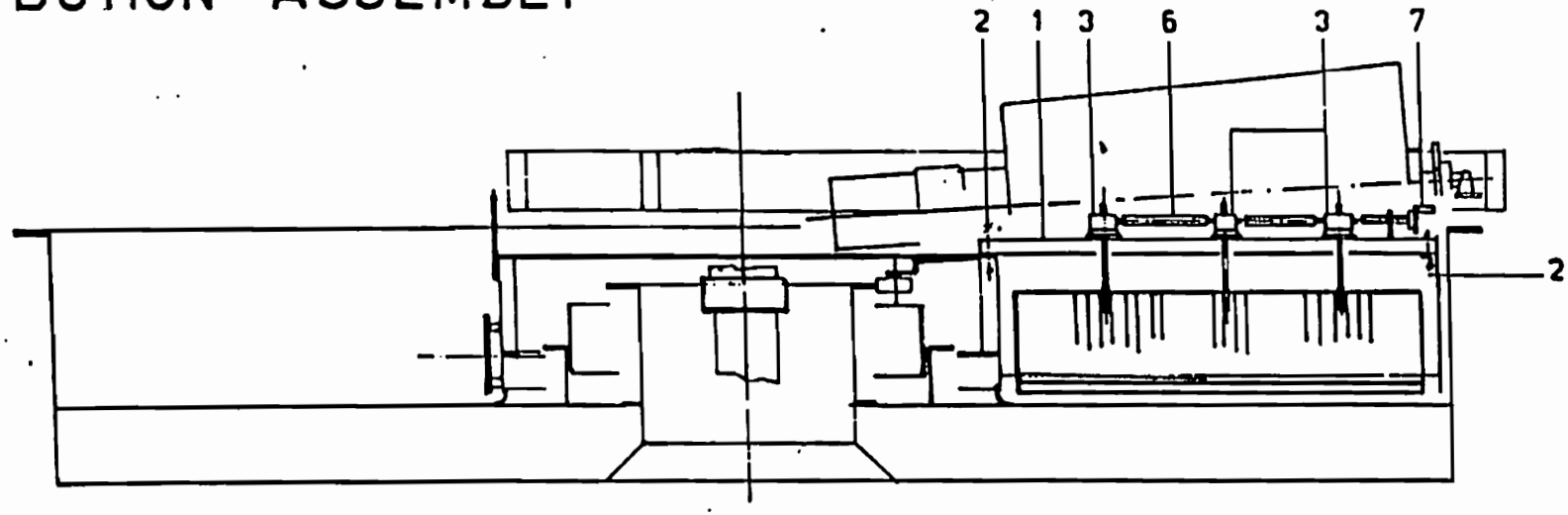
KROFTA SUPRACELL DISTRIBUTION ASSEMBLY



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60 MON 09

KROFTA SUPRACELL
DISTRIBUTION DETAILS

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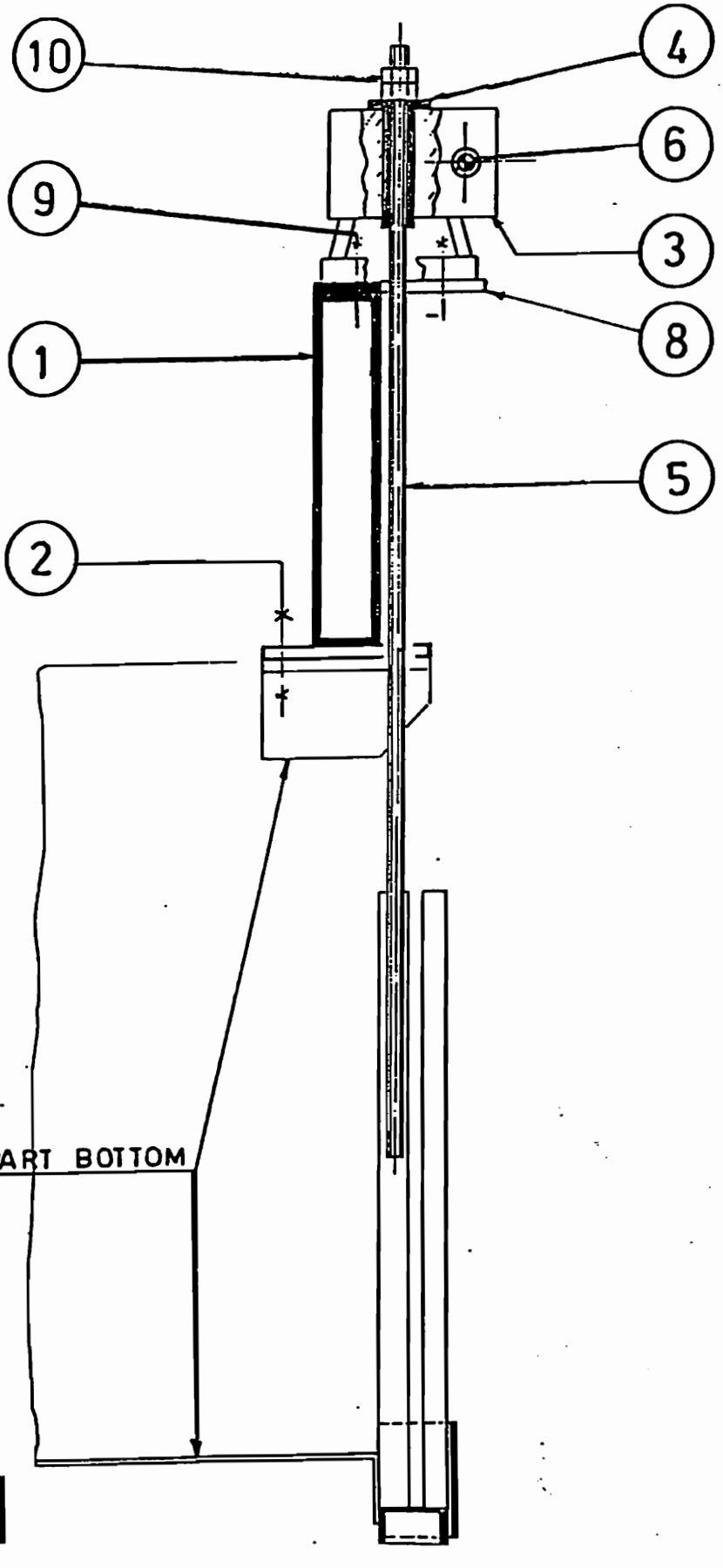

MOVABLE PART BOTTOM

MON 04

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MON 09/A

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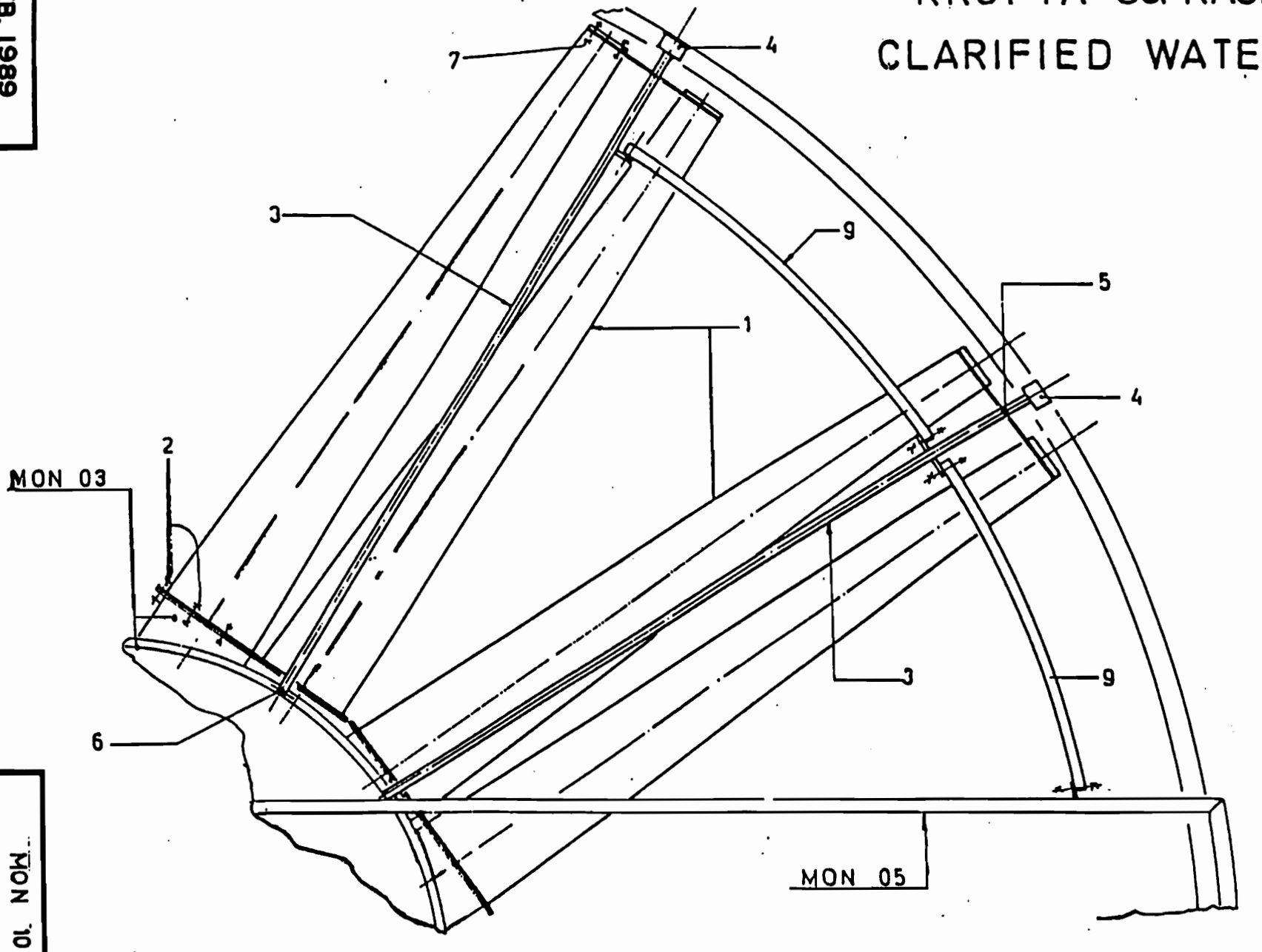
KROFTA SUPRACELL CLARIFIED WATER PIPE



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01. MON 10

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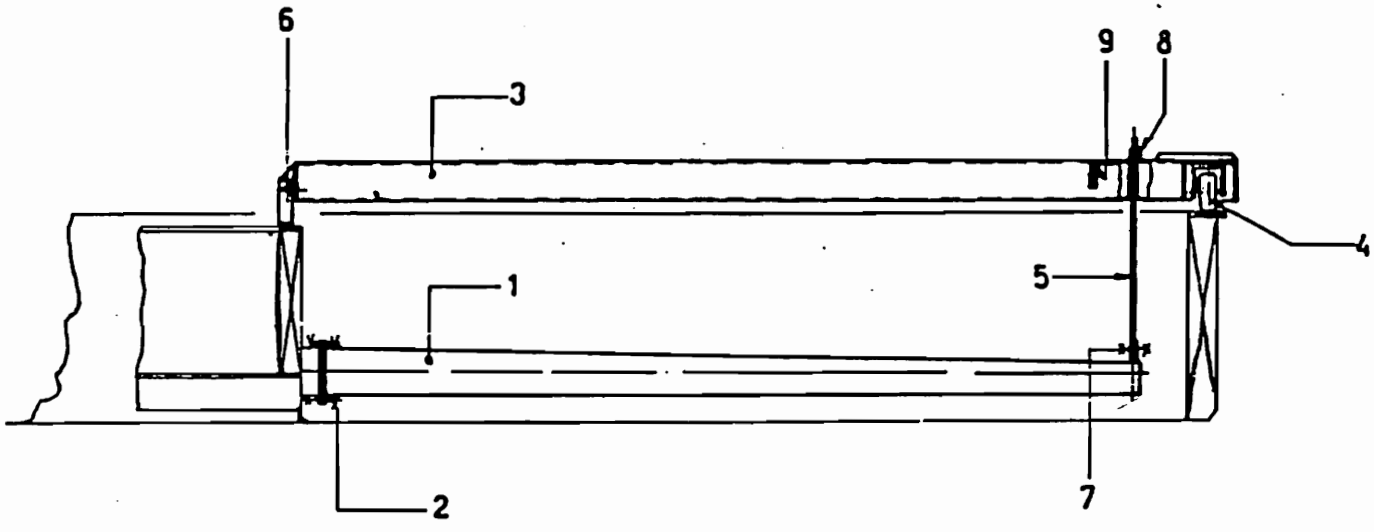
KROFTA SUPRACELL
CLARIFIED WATER PIPE DETAILS



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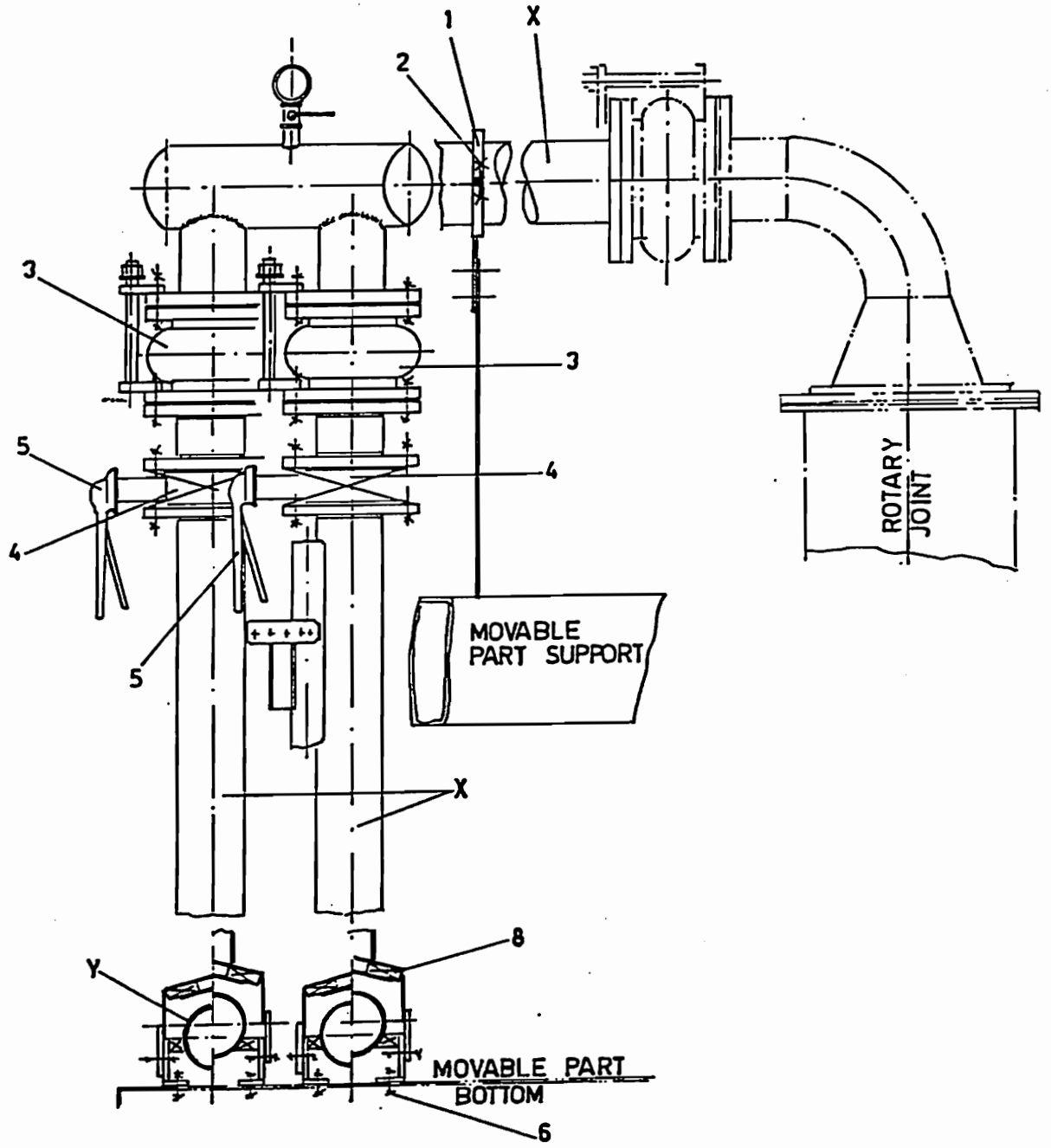
MON 10/A

KROFTA SUPRACELL

PRESSURIZED PIPE



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MON 11

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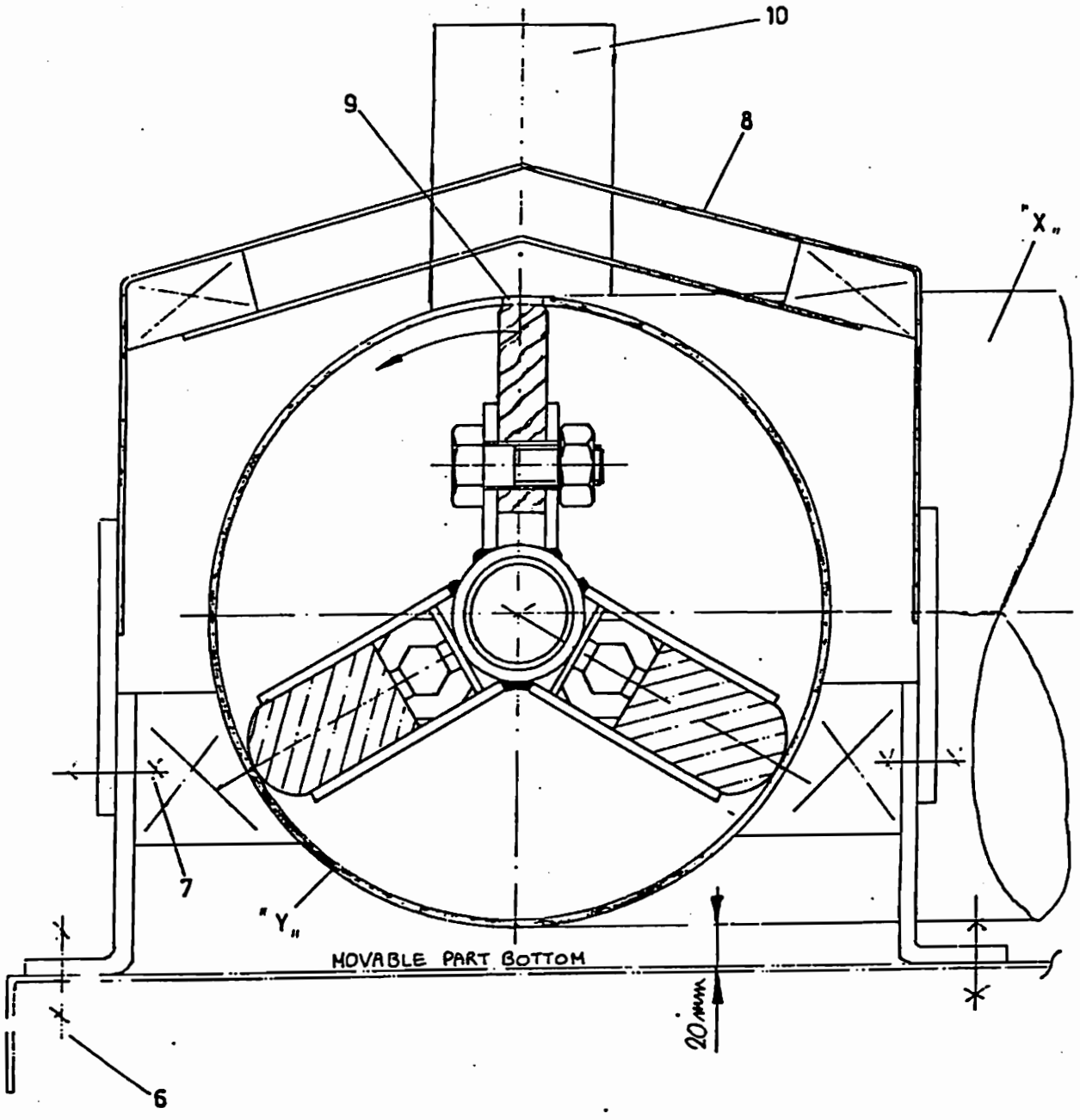
KROFTA SUPRACELL
INTERNAL DETAILS PRESS PIPES



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MON 11/A