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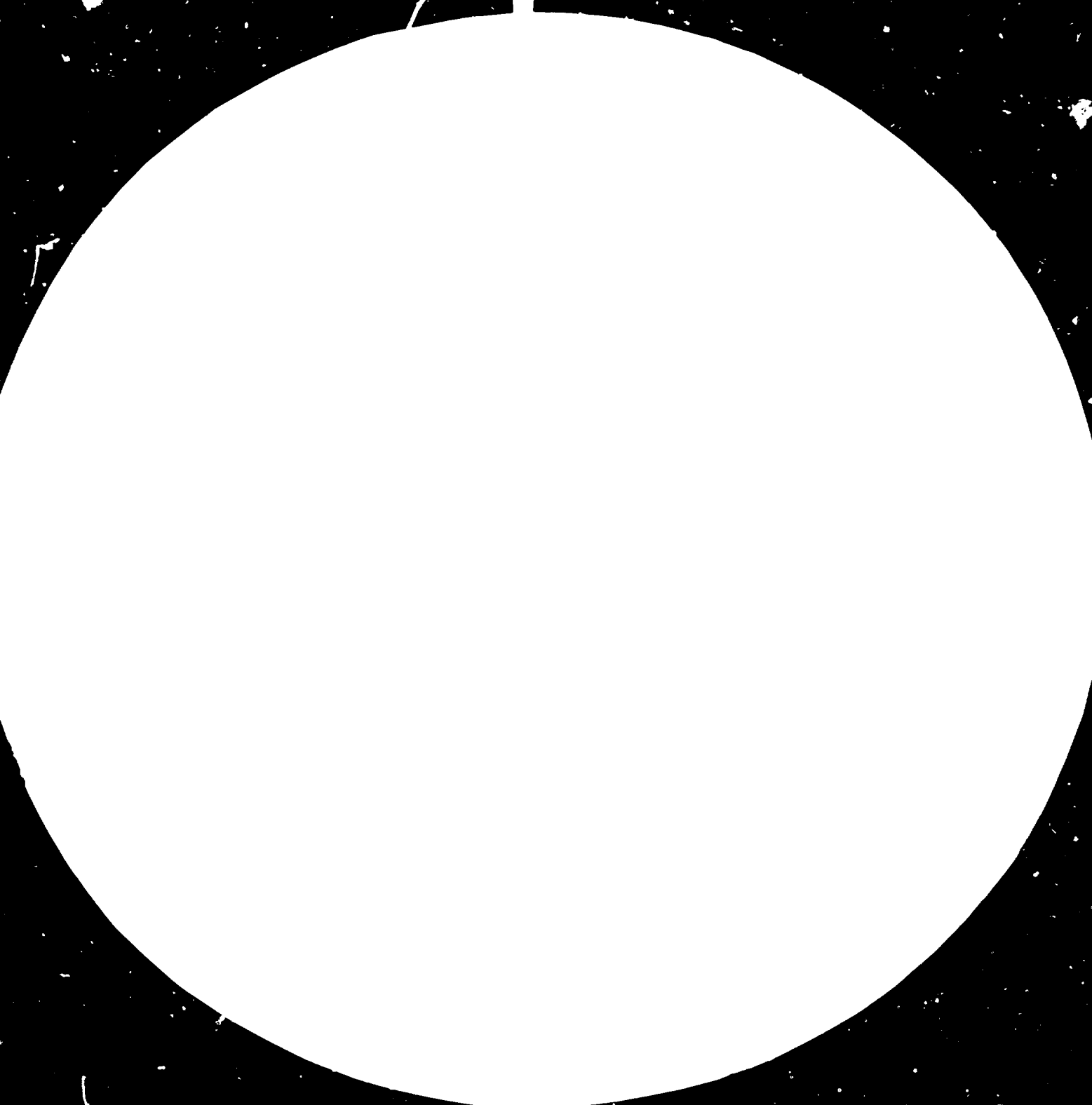
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REPAIR SHIPYARD  
FOR SMALL SEAGOING  
AND RIVER SHIPS \*

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1. GENERAL

The shipyard is destined to repair steel and wooden ships up to 32 m of length and 14 m of breadth.

Repairs of bigger ships (up to 60 m length) which do not require docking are possible.

The shipyard may be located in tropical or subtropical zone.

2. PRODUCTIVITY

The shipyard may realize a repair programme requiring about 300.000 working hours.

3. EXAMPLE OF REPAIR PROGRAMME

Repairs of steel ships 20-32 m length	40 ships per year
"                    13-18 m length	80    "
Repairs of wooden boats up to 13 m length	100 boats per year
Repairs of outfit of ships 32-60 m length	12 ships per year

4. SCOPE OF REPAIRS

The shipyard is equipped to pay hull conservation services mainly. It possesses, however, equipment:

- to repair the hulls, piping and outfit;
- to change damaged parts of machinery and to produce simple elements of outfit and machinery.

5. TECHNOLOGY

The ship is docked on the vertical lift and moved on cradles to the repair stand.

The hull is cleaned by means of high pressure water spraying, sand-blasting and scrapped with manual tools, painted hydromechanically. The repair shops repair or produce the outfit element. The ships which are not to be docked are repaired at the quay.

6. BASIC TECHNOLOGICAL EQUIPMENT

1. Vertical lift 3,000 kN (300 T) with the set of cradles	1
2. Semiautomatic device for oxygen cutting	1
3. Welding rectifier 315 A	6
4. Sandblasting device	4
5. Guillotine shears for 2,000 x 3 mm plates	1
6. Flanging press for 2,000 x 4 mm plates	1
7. Sharpener (grinding disc dia 350 mm)	3
8. Square column drill, drilling dia 40 mm	2
9. Bending rolls for 2,000 x 4 mm plates	1
10. Hack saw max/min dia of material 300/20 mm	2
11. Furnace 1000°C chamber 340 x 230 x 640	1
12. Band saw (for wood) cutting height 380 mm	1
13. Tilting circular saw (for wood) cutting depth 115 mm	1
14. Bottom spindle moulding machine - dia of milling cutters 100 mm	1
15. Thicknessing machine depth of material 250/3 mm	1
16. Planing machine width of cut 410 mm	1
17. Universal lathe, length 2,000 mm swing over bed 530 mm	1
18. Universal lathe, length 500 mm swing over bed 200 mm	2
19. Universal lathe, length 4,000 mm swing over bed 400 mm	1
20. Shaper table 800 x 500	1
21. Universal milling machine, table 315 x 1,250 mm	1
22. Milling and boring machine, spindle dia 110 mm	1
23. Universal sharpener	1
24. Foam spraying equipment	1
25. High pressure water cleaning equipment	2
26. Hydromechanically operated spraying gun	2
27. Compressor hammer 50 kg	1
28. Electrical drier 250°C	1
29. Mobile crane 16 T	2
30. Fork lift truck 2,000 kg	2
31. Fork lift truck 1,200 kg	2
32. Diesel driven truck, pulling output 630 kg	1
33. Set of hand tools and manually operated hydraulic, pneumatic and electric tools to enable the start of production	1 set

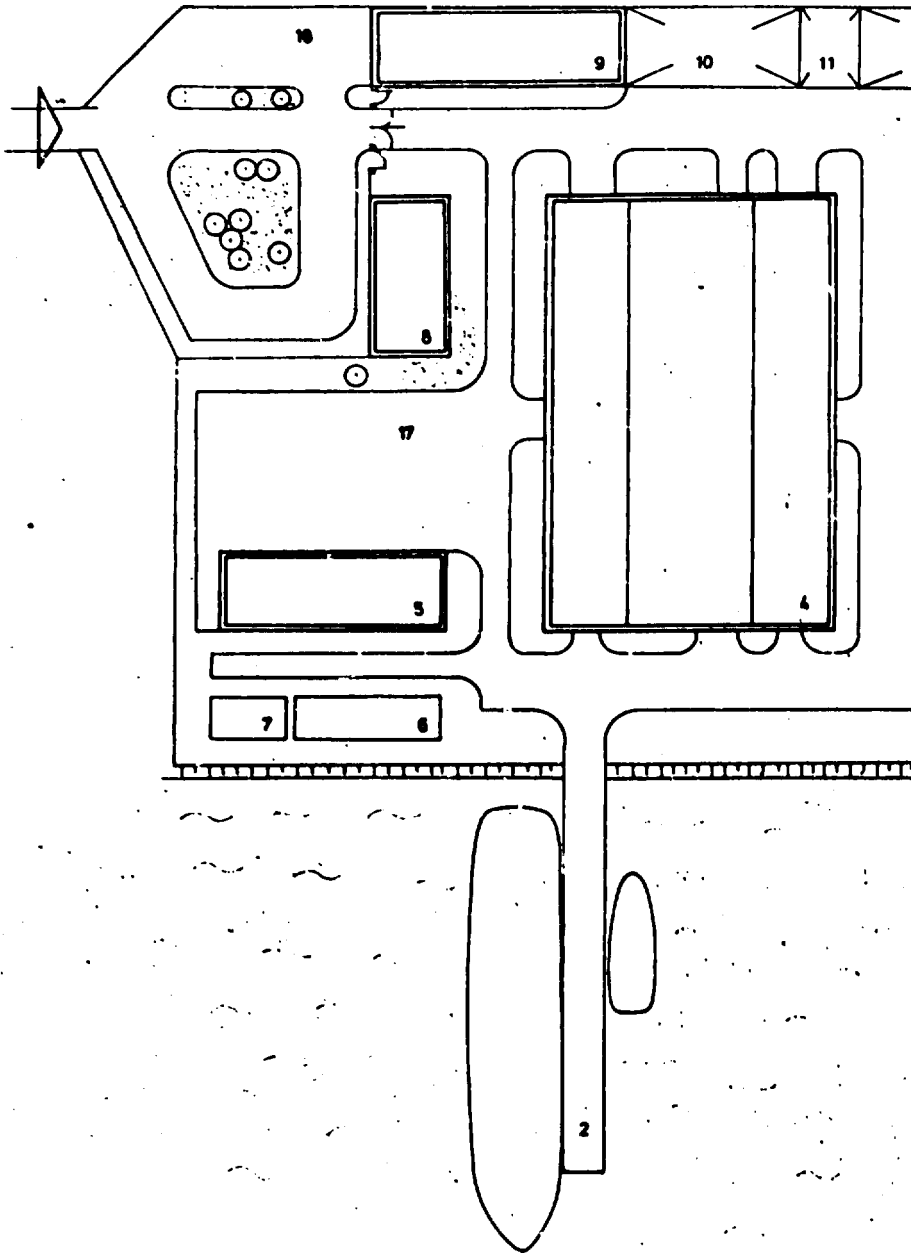
7. SERVICES

The shipyard is provided with power plant, air compressors station, water mill, fuel oil and propane tanks, sewage epuration station, telephone exchange, hot water boiler.

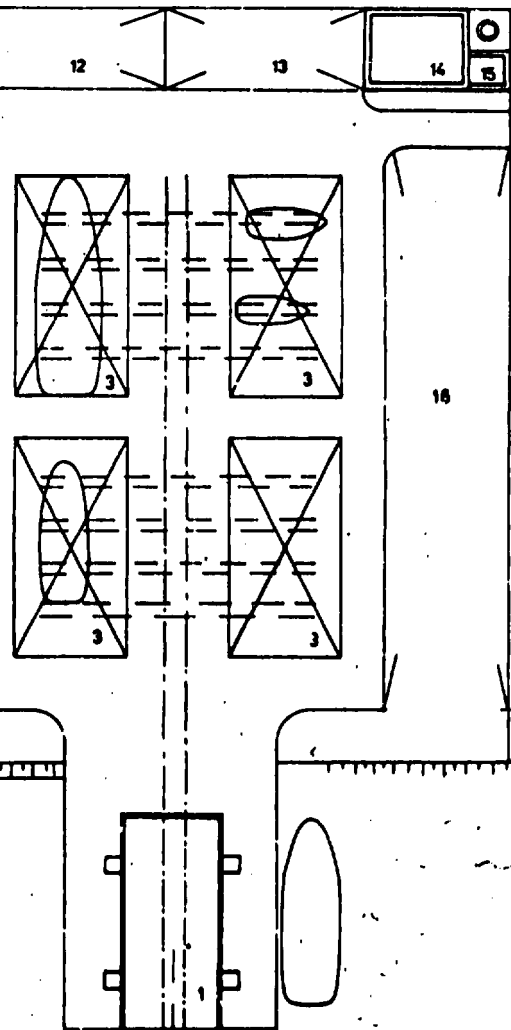
8. AREA AND EMPLOYMENT

Area demand amounts to about 2 ha;

Employment to about 200 persons (thereof 160 workers).







### LIST OF OBJECTS

1. VERTICAL LIFT 300 Mg
2. PIER
3. REPAIR STANDS
4. WORKSHOPS AND STORES
5. POWER PLANT, COMPRESSORS, MAINTENANCE SHOP
6. FUEL OIL, PROPANE TANKS
7. SEWAGE EPURATION
8. OFFICE
9. AMENITIES, GATE HOUSE
10. WOOD STORAGE
11. WASTES STORAGE
12. STEEL STORAGE
13. DECK EQUIPMENT STORAGE
14. PAINTS STORE
15. WATER WELL
16. INTERMEDIATE STORAGE
17. TRANSPORT VEHICLES PARK
18. PARKING

## REPAIR SHIPYARD FOR

RIVER AND SEAGOING SMALL SHIPS

