



CORPORATE STANDARD

AA7248105

Rev. No.01

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DEE SHACKLES-GRADE 30

1.0 SCOPE

This standard covers Dee shackles of grade 30 having screwed pin with eye and collar, suitable for safe working load (SWL) for 1 to 63 tonnes.

2.0 DESIGNATION

A dee shackle of grade 30, suitable for safe working load of 2 tonnes shall be designated as

2.1 On Drawings

- i) Material specification column : AA7248105
- ii) Description column : DEE SHACKLE, GR. 30, SWL-2T

2.2 For placing indents on purchase

DEE SHACKLE GRADE 30, SWL-2T; AA7248105

2.3 For issuing enquiries and placing purchase orders

While issuing enquires and purchase orders, delete BHEL standard number from above description and add the information given under clause 3.0.

3.0 COMPLIANCE WITH STANDARDS

3.1 DIMENSIONS, FINISH, TOLERANCE AND GENERAL REQUIREMENTS

As per IS: 6132-1972, part 1 & 2

3.2 MATERIAL

The body and the pin of the dee shackles shall be manufactured from the carbon steel conforming to IS: 1875-1992, class 2 having minimum tensile strength of 410 N/mm² (42 kgf/mm²)

3.3 HEAT TREATMENT

All bodies and pins of the dee shackles shall be heat treated as specified in IS: 6132, part 1.

3.4 HARDNESS: 120 to 170 HB.

3.5 TYPE OF PIN: Screwed pin with eye and collar.

3.6 THREADS: Coarse pitch to IS: 4218, part 2-2001.

3.7 MARKING: As stated in IS: 6132, part 1.

Revisions:

Clause 26.03 of MOM of MRC-SMC+RP

APPROVED:

INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(SMC+RP)

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Reaffirmed

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HEP, Bhopal

Corp. R&D

01-02-1978

4.0 TEST CERTIFICATES

Manufacturer shall supply with each batch of material, three copies of test certificates containing the following information:

In addition, the supplier shall ensure to enclose one copy of the test certificate along with their despatch documents to facilitate quick clearance of the material.

For each batch:

AA7248105, Rev 01: DEE SHACKLES-GRADE 30

BHEL order No.

Date of testing

No. & Size

Hardness range

Mechanical properties, Tensile strength & % of elongation

Details of heat treatment

Manufacturer's name

For each item:

Manufacturer's identification No.

Safe working load (kg)

Proof load applied

5.0 PROOF LOAD

As specified in IS: 6132, part 2, each Dee shackle after manufacture and subsequent heat treatment shall be subjected to a proof load at the centre of the pin as per table-2. IS: 6132, Part 2 which it shall withstand without showing permanent set. After removal of the proof load each shackle shall be thoroughly examined and shall be accepted only if found free from visible flaw or defect.

6.0 MAXIMUM LOAD

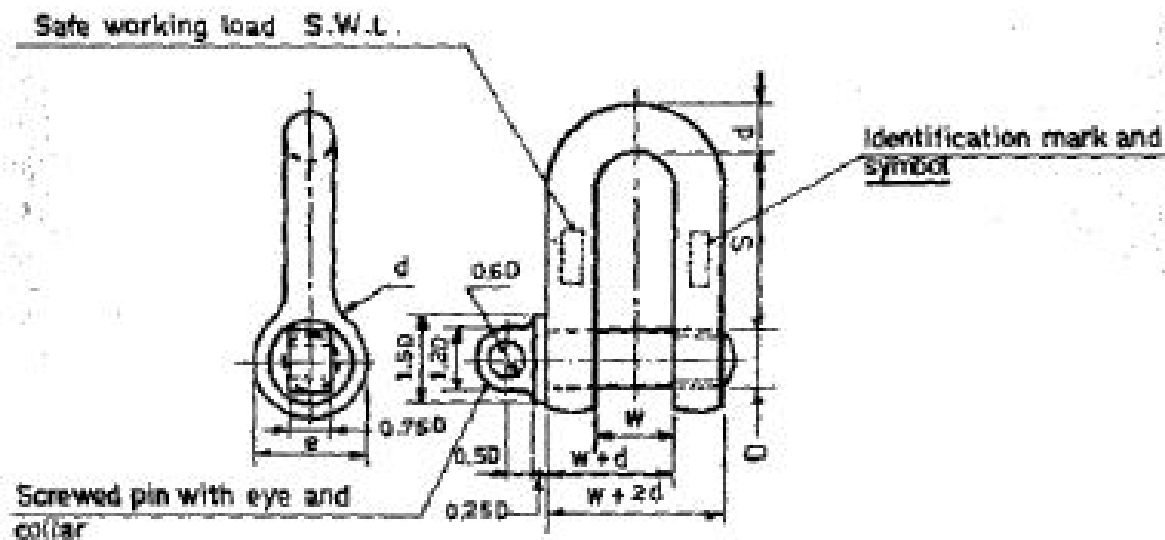
It is recommended that for normal conditions of use, the maximum load for any Dee shackle shall not exceed the safe working load.

7.0 PRECAUTIONS

Periodical inspection/examination shall be done of Dee shackles and when the threads show signs of damage or the bow of Dee shackle shows appreciate bruising, the Dee shackle shall be scrapped.

8.0 REFERRED STANDARDS (Latest publications including amendments)

Nil



All dimensions in mm

Safe Working Load S.W.L. Tonnes	Jaw inside width W	Inside length $S=2.2W$	Body material diameter d	Pin diameter D min	Eye outside diameter e min	Weight (Approx) per piece kg	Sub-Code
0.4	18	40	10	12	24	-	317
0.6	20	44	12	14	28	-	325
1.0	22	49	14	16	32	1	015
1.25	25	55	16	19	38	1.5	023
1.6	28	62	17	20	40	2.5	031
2.0	32	70	19	22	44	3.0	040
2.5	34	79	22	26	52	3.0	
3.2	40	88	24	28	56	3.5	066
4.0	45	99	27	31	62	3.5	074
5.0	50	110	30	35	70	4	082
6.3	56	124	34	39	78	8	
8.0	63	139	38	44	88	11	
10.0	70	154	43	50	100	12	
12.5	80	176	48	55	110	13	
16.0	90	198	54	62	124	15	
20.0	100	220	60	69	138	24	
25.0	107	236	66	76	152	27	
32.0	117	258	71	82	164	30	
40.0	130	286	79	91	182	33	
50.0	140	308	84	97	194	36	
63.0	153	337	93	110	220	40	

Note:

- Corporate sub-codes have been shown against corporate rationalised sizes.
- Sizes used by the individual plants are covered in annexure along with complete code nos.