

ENQUIRY (IMPORTS) (A Government of India Undertaking) 80, G.N.ROAD, T.NAGAR Purchase Department - Piping Centre CHENNAI - 600 017. TAMILNADU (INDIA)

PHONE :

GRAMS: BHARATELEC

FAX NO: E-mail: Web:

얼마 하는 하고 있는 것이라고 있는 이라고 있는 이는 그리고 있는 것이 없는 그 모든 것이다.	Enquiry No	Enquiry Date	Due Date for
			Quotation
하고 하고 있다. 전, 2012년 전 1일			Quotation
	4201200071	17.04.2012	08.05.2012
	4201200071	17.04.2012	00.00.2012
그림 아이들은 그 아래도 하는 이번 모든 사람들이 되었다.			

Please quote Enquiry No, Date and due date in all correspondences.

This is only a request for quotation and not an order

Item	Description	Unit	Quantity	Delive Quantit	
10	HYDRAULIC SNUBBER TAG CRH-SX1 AS PER SPECIFICATION PC:TSP:DBPL:001 L714118090102001	NO	2.000	2.00	10.09.12
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	Var. No:				 A property of the most
20	HYDRAULIC SNUBBER TAG CRH-SX2 AS PER SPECIFICATION PC:TSP:DBPL:001 L714118090102002	NO	2.000	2.00	10.09.12
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30	HYDRAULIC SNUBBER TAG CRH-SX3 AS PER SPECIFICATION PC:TSP:DBPL:001 L714118090102003	NO	2.000	2.00	10.09.12
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40	HYDRAULIC SNUBBER TAG HRH-SX1 AS PER . SPECIFICATION PC:TSP:DBPL:001	NO	2.000	2.00	10.09.12
	L714118090102004			8 - 1	
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50	HYDRAULIC SNUBBER TAG HRH-SXZ1 AS PER SPECIFICATION PC:TSP:DBPL:001	NO	2.000	2.00	10.09.12
	L714118090102005				
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60	HYDRAULIC SNUBBER TAG HRH-SXZ2 AS PER SPECIFICATION PC:TSP:DBPL:001	NO	2.000	2.00	10.09.12
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70	HYDRAULIC SNUBBER TAG NO LPBP-SX1 AS PER SPECIFICATION PC:TSP:DBPL:001 L714118090102007	NO	2.000	2.00	10.09.12

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The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

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80	HYDRAULIC SNUBBER TAG NO LPBP-SX2 AS PER SPECIFICATION PC:TSP:DBPL:001	NO	2.000	2.00	10.09.12
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90	HYDRAULIC SNUBBER TAG NO LPBP-SY1 AS PER SPECIFICATION PC:TSP:DBPL:001	NO	1.000	1.00	10.09.12
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10	HYDRAULIC SNUBBER TAG NO LPBP-SZ1 AS PER SPECIFICATION PC:TSP:DBPL:001 L714118090102011	NO	1.000	1.00	10.09.12
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20	L714118090102012 WELD ON BRACKET FOR TAG NO CRH-SX1	NO	4.000	4.00	10.09.12
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30	L714118090102013 WELD ON BRACKET FOR TAG NO CRH-SX2	NO	4.000	4.00	10.09.12
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40	L714118090102014 WELD ON BRACKET FOR TAG NO CRH-SX3	NO	4.000	4.00	10.09.12
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50	L714118090102015 WELD ON BRACKET	NO	4.000	4.00	10.09.12
	FOR TAG NO HRH-SX1	NO	4,000	4.00	10.09.12
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60	L714118090102016 WELD ON BRACKET	NO	4.000	4.00	10.09.12

MANAGER / PURCHASE (Piping Centre)

opening.Late and delayed offers are liable to be rejected.

	FOR TAG NO HRH-SXZ1				
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70	L714118090102017 WELD ON BRACKET FOR TAG NO HRH-SXZ2	NO .	4.000	4.00	10.09.12
•	Draw.No: Var.No:				
180	L714118090102018 WELD ON BRACKET FOR TAG NO LPBP-SX1	NO:	4.000	4.00	10.09.12
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190	L714118090102019 WELD ON BRACKET FOR TAG NO LPBP-SX2	NO	4,000	4.00	10.09.12
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200	L714118090102020 WELD ON BRACKET FOR TAG NO LPBP-SY1	NO	2.000	2.00	10.09.12
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210	L714118090102021 WELD ON BRACKET FOR TAG NO LPBP-SY2	NO	2.000	2.00	10.09.12
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220	L714118090102022 WELD ON BRACKET FOR TAG NO LPBP-SZ1	NO	2.000	2.00	10.09.12
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230	HYDRAULIC SNUBBER TAG CRH-SX1 AS PER SPECIFICATION PC:TSP:DBPL:001 L714218090102001	NO	2.000	2.00	10.09.12
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240	HYDRAULIC SNUBBER TAG CRH-SX2 AS PER SPECIFICATION PC:TSP:DBPL:001 L714218090102002	NO	2.000	2.00	10.09.12
	Draw.No: Var.No:				
250	HYDRAULIC SNUBBER TAG CRH-SX3 AS PER	NO	2.000	2.00	10.09.12

	SPECIFICATION PC:TSP:DBPL:001 L714218090102003				
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260	HYDRAULIC SNUBBER TAG HRH-SX1 AS PER SPECIFICATION PC:TSP:DBPL:001 . L714218090102004 .	NO	2.000	2.00	. 10.09.12
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270	HYDRAULIC SNUBBER TAG HRH-SXZ1 AS PER SPECIFICATION PC:TSP:DBPL:001 L714218090102005	NO	2.000	2.00	10.09.12
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280	Var.No: HYDRAULIC SNUBBER TAG HRH-SXZ2 AS PER SPECIFICATION PC:TSP:DBPL:001 L714218090102006	NO	2.000	2.00	10.09.12
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90	Var. No: HYDRAULIC SNUBBER TAG LPBP-SX1 AS PER SPECIFICATION PC:TSP:DBPL:001 L714218090102007	NO	2.000	2.00	10.09.12
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300	Var.No: HYDRAULIC SNUBBER TAG LPBP-SX2 AS PER SPECIFICATION PC:TSP:DBPL:001 L714218090102008	NO	2.000	2.00	10.09.12
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310	Var. No: HYDRAULIC SNUBBER TAG LPBP-SY1 AS PER SPECIFICATION PC:TSP:DBPL:001 L714218090102009	NO	1.000	1.00	10.09.12
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320	Var.No: HYDRAULIC SNUBBER TAG LPBP-SY2 AS PER SPECIFICATION PC:TSP:DBPL:001 L714218090102010	NO	1.000	1.00	10.09.12
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30	Var.No: HYDRAULIC SNUBBER TAG LPBP-SZ1 AS PER SPECIFICATION PC:TSP:DBPL:001 L714218090102011	NO	1.000	1.00	10.09.12

MANAGER / PURCHASE (Pping Centre)

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	Draw.No: Var.No:				
340	L714218090102012 WELD ON BRACKET FOR TAG NO CRH-SX1	NO	4.000	4.00	10.09.12
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50	L714218090102013 WELD ON BRACKET FOR TAG NO CRH-SX2	NO ·	4.000	4.00	10.09.12
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860	· L714218090102014 WELD ON BRACKET FOR TAG NO CRH-SX3	NO	4.000	4.00	10.09.12
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70	L714218090102015 WELD ON BRACKET FOR TAG NO HRH-SX1	NO	4.000	4.00	10.09.12
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80	L714218090102016 WELD ON BRACKET FOR TAG NO HRH-SXZ1	NO	4.000	4.00	10.09.12
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90	L714218090102017 WELD ON BRACKET FOR TAG NO HRH-SXZ2	NO	4.000	4.00	10.09.12
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10	L714218090102019 WELD ON BRACKET FOR TAG NO LPBP-SX2	NO	4.000	4.00	10.09.12
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20	L714218090102020 WELD ON BRACKET FOR TAG NO LPBP-SY1	NO	2.000	2.00	10.09.12

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	Draw.No: Var.No:				
30	L714218090102021 WELD ON BRACKET FOR TAG NO LPBP-SY2	NO	2.000	2.00	10.09.12
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40	Var. No: L714218090102022 WELD ON BRACKET FOR TAG NO LPBP-SZ1	NO	2.000	2.00	10.09.12
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50	Var. No: HYDRAULIC SNUBBER TAG NO CRH-SX1 AS	NO	2.000	2.00	10.09.12
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50	HYDRAULIC SNUBBER TAG NO CRH-SX2 AS PER SPECIFICATION PC:TSP:VISA:001 L714518090102002	NO	2.000	2.00	10.09.12
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70	Var.No: HYDRAULIC SNUBBER TAG NO CRH-SX3 AS PER SPECIFICATION PC:TSP:VISA:001 L714518090102003	NO	2.000	2.00	10.09.12
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00	Var.No: HYDRAULIC SNUBBER TAG NO HRH-SXZ2 AS PER SPECIFICATION PC:TSP:VISA:001	NO	2.000	2.00	10.09.12
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MANAGER / PURCHASE (Pping Centre)

tenderers who have submitted their offer and who may like to be present for the tender

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510	HYDRAULIC SNUBBER TAG NO LPBP-SX1 AS PER SPECIFICATION PC:TSP:VISA:001 L714518090102007	NO	2.000	2.00	10.09.12
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20	HYDRAULIC SNUBBER TAG NO LPBP-SX2 AS PER SPECIFICATION PC:TSP:VISA:001 L714518090102008	NO	2.000	2.00	10.09.12
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30	HYDRAULIC SNUBBER TAG NO LPBP-SY1 AS PER SPECIFICATION PC:TSP:VISA:001	NO	1.000	1.00	10.09.12
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40	HYDRAULIC SNUBBER TAG NO LPBP-SY2 AS PER SPECIFICATION PC:TSP:VISA:001 L714518090102010	NO	1.000	1.00 Criss as Section 1	10.09.12
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50	Var.No: HYDRAULIC SNUBBER TAG NO LPBP-SZ1 AS PER SPECIFICATION PC:TSP:VISA:001 L714518090102011	NO	1.000	1.00	10.09.12
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50	L714518090102012 WELD ON BRACKET FOR TAG NO CRH-SX1	NO	4.000	114 April 4.00	10.09.12
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70	L714518090102013 WELD ON BRACKET FOR TAG NO CRH-SX2	NO	4.000	4.00	10.09.12
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30	L714518090102014 WELD ON BRACKET FOR TAG NO CRH-SX3	NO	4.000	4.00	10.09.12
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0	L714518090102015 WELD ON BRACKET	NO	4.000	4.00	10.09.12

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For BHARAT HEAVY ELECTRICALS LIMITED

कारत इस्त संग्रह

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking) 80, G.N.ROAD, T.NAGAR Purchase Department - Piping Centre CHENNAI - 600 017. TAMILNADU (INDIA)

	Draw.No: Var.No:				
00	L714518090102016 WELD ON BRACKET FOR TAG NO HRH-SXZ1	NO	4.000	4.00	10.09.12
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10	L714518090102017 WELD ON BRACKET FOR TAG NO HRH-SXZ2	NO	4.000	4.00	10.09.12
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30	L714518090102019 WELD ON BRACKET FOR TAG NO LPBP-SX2	NO	4.000	4.00	10.09.12
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40	L714518090102020 WELD ON BRACKET FOR TAG NO LPBP-SY1	NO	2.000	2.00	10.09.12
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60	L714518090102022 WELD ON BRACKET FOR TAG NO LPBP-SZ1	NO	2.000	2,00	10.09.12
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General Note:

1.CHECK LIST ENCLOSED SHOULD BE FILLED UP & SENT ALONG WITH YOUR OFFER 2.PROJECT

(i)VISA POWER-SPEC:PC:TSP:VISA:001 REV:00(3SHEETS)
DATA SHEET DRG NO:PC-VISA-SKT-01 REV 00(1 SHEET)
(ii)DB POWER-SPEC:PC:TSP:DBPL:001 REV:00(3 SHEETS)

DATA SHEET DRG NO:PC-DB-SKT-01 REV 00(1 SHEET)

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BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking) 80, G.N.ROAD, T.NAGAR Purchase Department - Piping Centre CHENNAI - 600 017. TAMILNADU (INDIA)

4201200071 / 17.04.2012

- 3.UNPRICED BID FORMAT
- 4. ENQUIRY TERMS AND CONDITIONS
- 5.BANK GUARANTEE FORMAT
- 6.STANDARD QUALITY PLAN FOR SNUBBERS QPG 55

Enclosures:

"LD clause has to be confirmed without fail."

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For BHARAT HEAVY ELECTRICALS LIMITED

	SPEC :P	C:TSP:DB	PL:001	REV: 00			
TECHNICAL SPECIFICATION FOR	DATE: 22 CUST.NO:	2.02.12 7141, 7142			NO OF	SHEET	S:3
HYDRAULIC SNUBBERS	PREPD	MRK	CHKD	M	I.MANO	APPD	C.K.KARAN

General Requirements

The snubbers shall be mounted in between a piping system and the supporting structure. The purpose is to protect the piping/components against Dynamic movements arising from sudden changes in steam flow, safety valve reactions, earthquake etc.

The snubber shall allow free movement of the piping with minimum frictional resistance when subjected to non-dynamic movements such as thermal expansion and contraction.

The snubber shall limit motion, when the component is subjected to dynamic or impulse loads. The snubber shall be "locked up" and form a rigid connection when the piping is subjected to dynamic/seismic motion thereby protecting the piping by limiting their relative displacement. The snubbers shall be of double acting type so that it can lock the motion of component and resist inertial forces of highly oscillatory nature, in both directions along longitudinal axis of the snubber.

Technical requirements

Stroke Length

The Snubber storke length shall be decided based on the thermal movement of the pipe as given in the data sheet with a cushion of 25 mm on the either side.

The arrangement should permit swiveling motion not less than 6deg in all directions.

Mechanical

End Connection: Each end of the snubber shall be provided with self aligning bearing. One end of the snubber shall be connected to the pipe clamp to a weld on bracket and the other end to a weld on bracket attached to the supporting structure. The weld on brackets are to be supplied by the snubber supplier.

Materials & construction

Materials & construction shall conform to be as per MSS 58, 69, 89 and 90.

Specific requirements/Data

- 1. Application: For pipe support
- 2. The snubbers may be of hydraulic type.
- 3. The distance between the structural member and the pipe to be supported as indicated in the data sheet.
- 4. Recommended spares list to be furnished by supplier.
- 5. Supplier to furnish reference list, relevant catalogues and maintenance procedures..
- 6. For hydraulic snubber, the recommended Indian equivalent oil. If not, furnish the quantity of oil to be stocked as spare along with price particulars.
- 7. Filling instruction of oil to the shock absorber.
- 8. For data sheet refer drg no. PC-DB-SKT-01

Scope of Supply

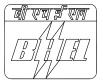
- 1. The length 'L' indicated in the data sheet is the actual length required based on arrangement in cold condition.
- 2. The supplier has to select the shock absorber type, extension tube and weld on bracket assembly.
- 3. dimension "A", "B" and "E" are to be selected by the supplier.
- 4. Snubber with necessary accessories as required.
- 5. Weld on brackets with pins etc.
- 6. Painting of the supplied equipment.
- 7. Any special tools as required for erection and maintenance.
- 8. Commissioning/recommended spares.

Documents to be submitted along with the offer:

- a. Dimensional drawings of the snubber and weld on bracket(s)
- b. Details of materials for the above
- c. Quality plan
- d. Reference list, relevant catalogues and maintenance procedures..
- e. Recommended spares list.
- f. Detailed equipment specification

Documents to be submitted along with supply of material

- a. Detailed dimensional drawings of the snubber and weld on bracket.
- b. Details of materials for the above.
- c. Quality plan.
- d. Recommended spares list..
- e. Special tools(if any).
- f. Erection instructions.
- g. Technical Data sheets.
- h. Maintenance instructions.

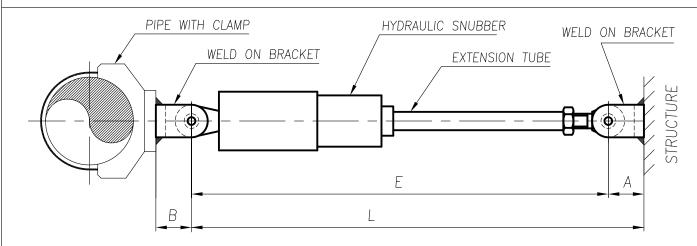


PIPING CENTRE

DATA SHEET FOR HYDRAULIC SNUBBER

PROJECT : DB POWER 2x600 MW

CUST No. : 7141,7142



- 1, DIMENSIONS A,B & E SHALL BE FIXED BY VENDOR WITH REF TO L max & L min AND THERMAL MOVEMENT.
- 2, L max L min INDICATES MINIMUM SNUBBER STROKE LENGTH REQUIRED.

SL No.	TAG No.	DESIGN LOAD ± KN	THERMAL MOVEMENT ALONG SHOCK — ABSORBER AXIS IN mm	L max	L min	QTY./UNIT	WELD ON BRACKET QTY./UNIT No.	REMARKS
01	CRH-SX1	150	100 (EXPANSION)	1388	1238	2	4	
02	CRH-SX2	80	100 (COMPRESSION)	1150	1000	2	4	
03	CRH-SX3	80	100 (COMPRESSION)	1150	1000	2	4	
04	HRH-SX1	125	200 (COMPRESSION)	1325	1075	2	4	
05	HRH-SXZ1	100	150 (COMPRESSION)	1435	1235	2	4	
06	HRH-SXZ2	100	150 (COMPRESSION)	1435	1235	2	4	
07	LPBP-SX1	100	75 (COMPRESSION)	825	700	2	4	
08	LPBP-SX2	80	150 (COMPRESSION)	1325	1125	2	4	
09	LPBP-SY1	100	75 (COMPRESSION)	2275 (L+B)	2150 (L+B)	1	2	
10	LPBP-SY2	100	75 (COMPRESSION)	2275 (L+B)	2150 (L+B)	1	2	
11	LPBP-SZ1	80	75 (COMPRESSION)	675 (L+B)	550 (L+B)	1	2	

NOTE :-

REFER TECHNICAL SPECIFICATION ENCLOSED HEREWITH. LOAD INDICATED IS FOR EACH SNUBBER

PREPARED	APPROVED	DATE	DRG. No.	REV.
			PC-DB-SKT-01	00
MRK	M.MANO	20.02.12		

	SPEC :PC:TSP:VISA:001				REV: 00		
TECHNICAL SPECIFICATION FOR	DATE: 22.02.12 CUST.NO: 7145			NO OF SHEETS: 3			
HYDRAULIC SNUBBERS	PREPD	MRK	CHKD	M	I.MANO	APPD	C.K.KARAN

General Requirements

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The snubber shall allow free movement of the piping with minimum frictional resistance when subjected to non-dynamic movements such as thermal expansion and contraction.

The snubber shall limit motion, when the component is subjected to dynamic or impulse loads. The snubber shall be "locked up" and form a rigid connection when the piping is subjected to dynamic/seismic motion thereby protecting the piping by limiting their relative displacement. The snubbers shall be of double acting type so that it can lock the motion of component and resist inertial forces of highly oscillatory nature, in both directions along longitudinal axis of the snubber.

Technical requirements

Stroke Length

The Snubber storke length shall be decided based on the thermal movement of the pipe as given in the data sheet with a cushion of 25 mm on the either side.

The arrangement should permit swiveling motion not less than 6deg in all directions.

Mechanical

End Connection: Each end of the snubber shall be provided with self aligning bearing. One end of the snubber shall be connected to the pipe clamp to a weld on bracket and the other end to a weld on bracket attached to the supporting structure. The weld on brackets are to be supplied by the snubber supplier.

Materials & construction

Materials & construction shall conform to be as per MSS 58, 69, 89 and 90.

Specific requirements/Data

- 1. Application: For pipe support
- 2. The snubbers may be of hydraulic type.
- 3. The distance between the structural member and the pipe to be supported as indicated in the data sheet.
- 4. Recommended spares list to be furnished by supplier.
- 5. Supplier to furnish reference list, relevant catalogues and maintenance procedures..
- 6. For hydraulic snubber, the recommended Indian equivalent oil. If not, furnish the quantity of oil to be stocked as spare along with price particulars.
- 7. Filling instruction of oil to the shock absorber.
- 8. For data sheet refer drg no. PC-VISA-SKT-01

Scope of Supply

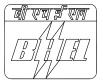
- 1. The length 'L' indicated in the data sheet is the actual length required based on arrangement in cold condition.
- 2. The supplier has to select the shock absorber type, extension tube and weld on bracket assembly.
- 3. dimension "A", "B" and "E" are to be selected by the supplier.
- 4. Snubber with necessary accessories as required.
- 5. Weld on brackets with pins etc.
- 6. Painting of the supplied equipment.
- 7. Any special tools as required for erection and maintenance.
- 8. Commissioning/recommended spares.

Documents to be submitted along with the offer:

- a. Dimensional drawings of the snubber and weld on bracket(s)
- b. Details of materials for the above
- c. Quality plan
- d. Reference list, relevant catalogues and maintenance procedures..
- e. Recommended spares list.
- f. Detailed equipment specification

Documents to be submitted along with supply of material

- a. Detailed dimensional drawings of the snubber and weld on bracket.
- b. Details of materials for the above.
- c. Quality plan.
- d. Recommended spares list..
- e. Special tools(if any).
- f. Erection instructions.
- g. Technical Data sheets.
- h. Maintenance instructions.

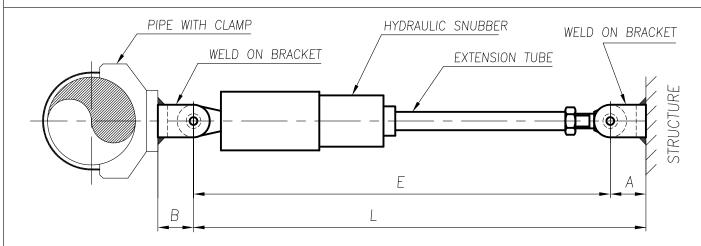


PIPING CENTRE

DATA SHEET FOR HYDRAULIC SNUBBER

PROJECT : VISA POWER 1x600 MW

CUST No. : 7145



- 1, DIMENSIONS A,B & E SHALL BE FIXED BY VENDOR WITH REF TO L max & L min AND THERMAL MOVEMENT.
- 2, L max L min INDICATES MINIMUM SNUBBER STROKE LENGTH REQUIRED.

SL No.	TAG No.	DESIGN LOAD ± KN	THERMAL MOVEMENT ALONG SHOCK — ABSORBER AXIS IN mm	L max	L min	QTY./UNIT	WELD ON BRACKET QTY./UNIT No.	REMARKS
01	CRH-SX1	150	100 (EXPANSION)	1388	1238 2		4	
02	CRH-SX2	80	100 (COMPRESSION)	1150	1000	2	4	
03	CRH-SX3	80	100 (COMPRESSION)	1150	1000	2	4	
04	HRH-SX1	125	200 (COMPRESSION)	1325	1075	2	4	
05	HRH-SXZ1	100	150 (COMPRESSION)	1435	1235	2	4	
06	HRH-SXZ2	100	150 (COMPRESSION)	1435	1235	2	4	
07	LPBP-SX1	100	75 (COMPRESSION)	825	700	2	4	
08	LPBP-SX2	80	150 (COMPRESSION)	1325	1125	2	4	
09	LPBP-SY1	100	75 (COMPRESSION)	2275 (L+B)	2150 (L+B)	1	2	
10	LPBP-SY2	100	75 (COMPRESSION)	2275 (L+B)	2150 (L+B)	1	2	
11	LPBP-SZ1	80	75 (COMPRESSION)	675 (L+B)	550 (L+B)	1	2	

NOTE :-

REFER TECHNICAL SPECIFICATION ENCLOSED HEREWITH. LOAD INDICATED IS FOR EACH SNUBBER

PREPARED	APPROVED	DATE	DRG. No.	REV.
			PC-VISA-SKT-01	00
MRK	M.MANO	20.02.12		