

15012 041

**DRAWING AND SPECIFICATION TRANSMITTAL**

**LOCKWOOD GREENE ENGINEERS, INC.**

SPARTANBURG, SOUTH CAROLINA 29304  
P.O. BOX 491 (803)582-2351

TO Naval Facilities Engineering  
Command  
Atlantic Division  
Norfolk, Va. 23511

DATE Nov. 30, 1979  
JOB NO. 77239.16  
JOB NAME Naval Regional Medical Center

TRANSMITTAL NO. 1928  
SHEET 1 OF 1  
ORDER NO.  
Contract Number  
N-62470-77-C-7526

ATTN: Mr. John Grubbs Code 05

WE ARE SENDING YOU THE FOLLOWING DATA xx HEREWITH        UNDER SEPARATE COVER

QUAN.	DOCUMENT NO.	REV. NO.	DESCRIPTION	VENDOR	CODE
1			Mfg.s' Data Pipe Hanger	Waldinger Corp.	RA

CODE FOR

LOCKWOOD GREENE DOCUMENTS

- A - INFORMATION
- B - REVIEW
- C - APPROVAL
- D - REVISED DWG. (SEE REVISION)

- E - BID
- F - CONSTRUCTION
- G - PURCHASING
- H -

VENDOR DOCUMENTS

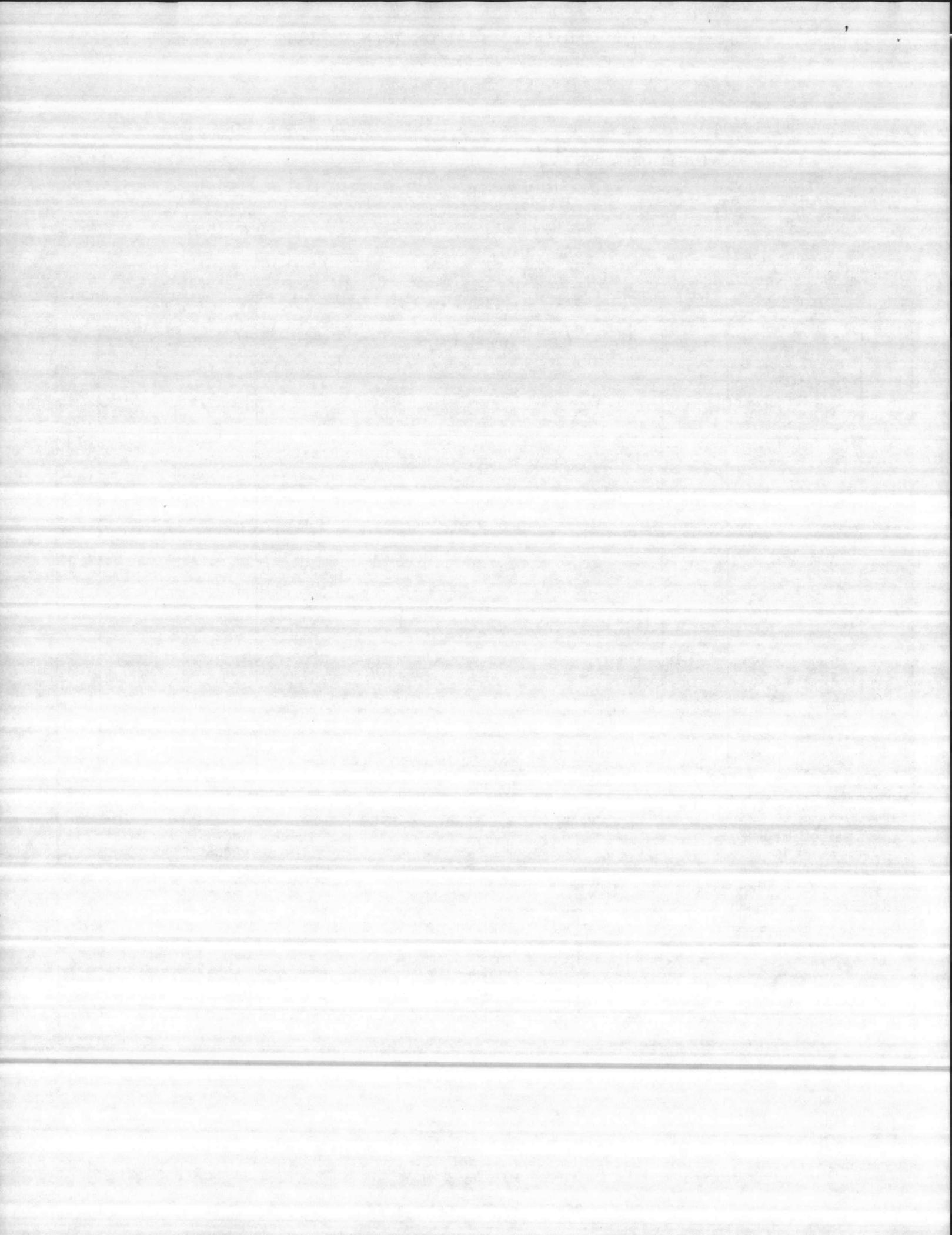
- K - NO CORRECTIONS NOTED
- L - MAKE CORRECTIONS NOTED
- M - REVISE AND RESUBMIT
- N - REJECTED (SEE REMARKS)

COPIES TO	QUAN	TRANS ONLY	CODE	COPIES TO	QUAN	TRANS ONLY	CODE
ROICC Cardinal Contracting	1						

REMARKS

PLEASE ACKNOWLEDGE RECEIPT BY IMMEDIATE RETURN OF SIGNED COPY OF THIS TRANSMITTAL

RECEIVED BY \_\_\_\_\_ DATE \_\_\_\_\_ TRANSMITTED BY Richard McKnight



**CONTRACTOR'S SUBMITTAL TRANSMITTAL**

5ND LANTDIV 4-4355/3 (Rev. 6/76)

*File*

CONTRACT NO. N62470-77-C-7526	TRANSMITTAL NO. 691	DATE 11/20/79
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SECTION 15012

FROM CONTRACTOR  
CARDINAL CONTRACTING CO., INC.  
TO  
LOCKWOOD-GREEN ENGRS.

PROJECT TITLE AND LOCATION  
NAVAL REGIONAL MEDICAL CENTER  
CAMP LEJEUNE, NORTH CAROLINA 28542

<p><b>CONTRACTOR USE ONLY</b></p> <p>*List only one specification division per form.</p> <p>List only one of the following categories on each transmittal form, and indicate which is being submitted</p> <p><input checked="" type="checkbox"/> Contractor Approved      <input type="checkbox"/> OICC Approval      <input type="checkbox"/> Deviation/Substitution For OICC Approval</p>	<p><b>REVIEWER USE ONLY</b></p> <p><b>1928</b></p> <p>**ACTION CODES</p> <p>A-Approved D-Disapproved AN-Approved as noted RA-Receipt acknowledged. C-Comments R-Resubmit</p>
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ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
691	3.3	Mfgs. Data Pipe Hangers	4	RA	<i>muj</i> 11-30-79

CONTRACTOR'S COMMENTS

*CQCR Action: #AN WJH 12/4/79*

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC: *11-26-79*

CONTRACTOR REPRESENTATIVE (Signature): *W.M.J. Haymaker*

DATE RECEIVED BY REVIEWER:      FROM (Reviewer):      TO:

- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on **ONE COPY** of the transmittal form.

REVIEWER'S COMMENTS

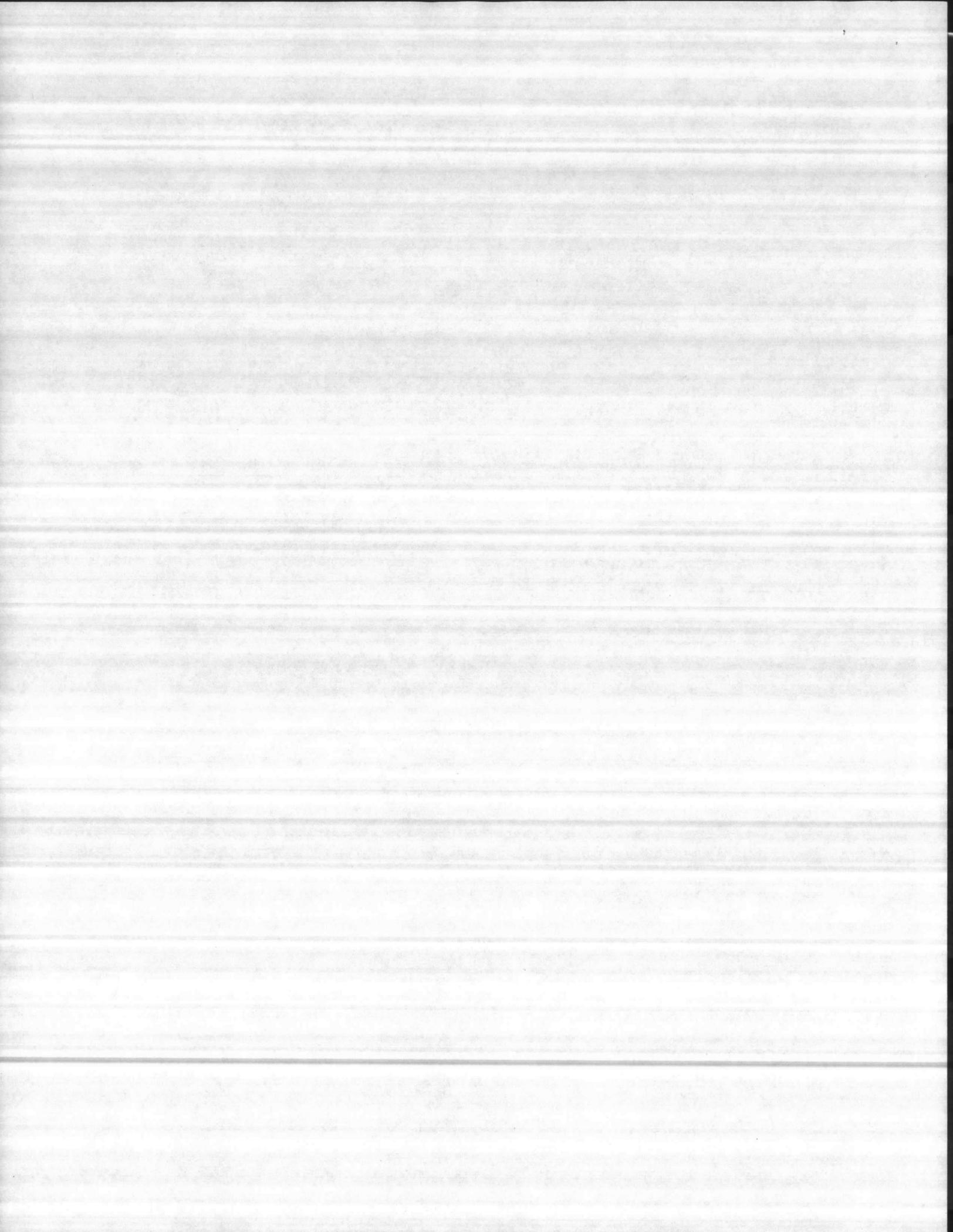
*MINOR CORRECTIONS WERE MADE BY THE REVIEWER. THE CONTRACTOR IS REQUESTED TO UPDATE HIS COPIES OF THIS SUBMITTAL, ACKNOWLEDGE CORRECTIONS BELOW, AND FORWARD THIS SUBMITTAL TO THE ROICC.*

*CORRECTIONS ACKNOWLEDGED Cardinal C.C. - WJH 12/4/79*

*Signature*      *Date*

COPIES TO: ROICC (2) LANTDIV (1) A-E (1)	DATE	SIGNATURE
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*File Field*  
*1-3-80*  
*lw*



PIPE HANGER SUBMITTAL

SPECIFICATION SECTION 15012

*Use roller hanger for steam, condensate, and boiler feedwater.*

Elcen figure 12, Type 1 Clevis Hanger, to be used on the following systems. Steam condensate, hot water, heating hot water, boiler feed water, domestic water, all other systems over 8".

Elcen figure 89 & 13, Type 10 & 7 E-Z hanger and pear shaped hanger to be used on the following systems. Sanitary 8" and under, storm, vent, domestic water, deionized water, treated water chemical feed, wet vacuum, vacuum, air, L.P. gas, fuel oil, medical gas, chilled water, condense water & condensate drains.

Elcen figure 91 E-Z grip protective hanger, to be used on acid waste system.

Elcen figure 96 & 227 isolator and hanger combination, isolator-pipe to be used on medical gas system.

The above hangers conform to the following specifications WW-H 171D and SP-69-1976.

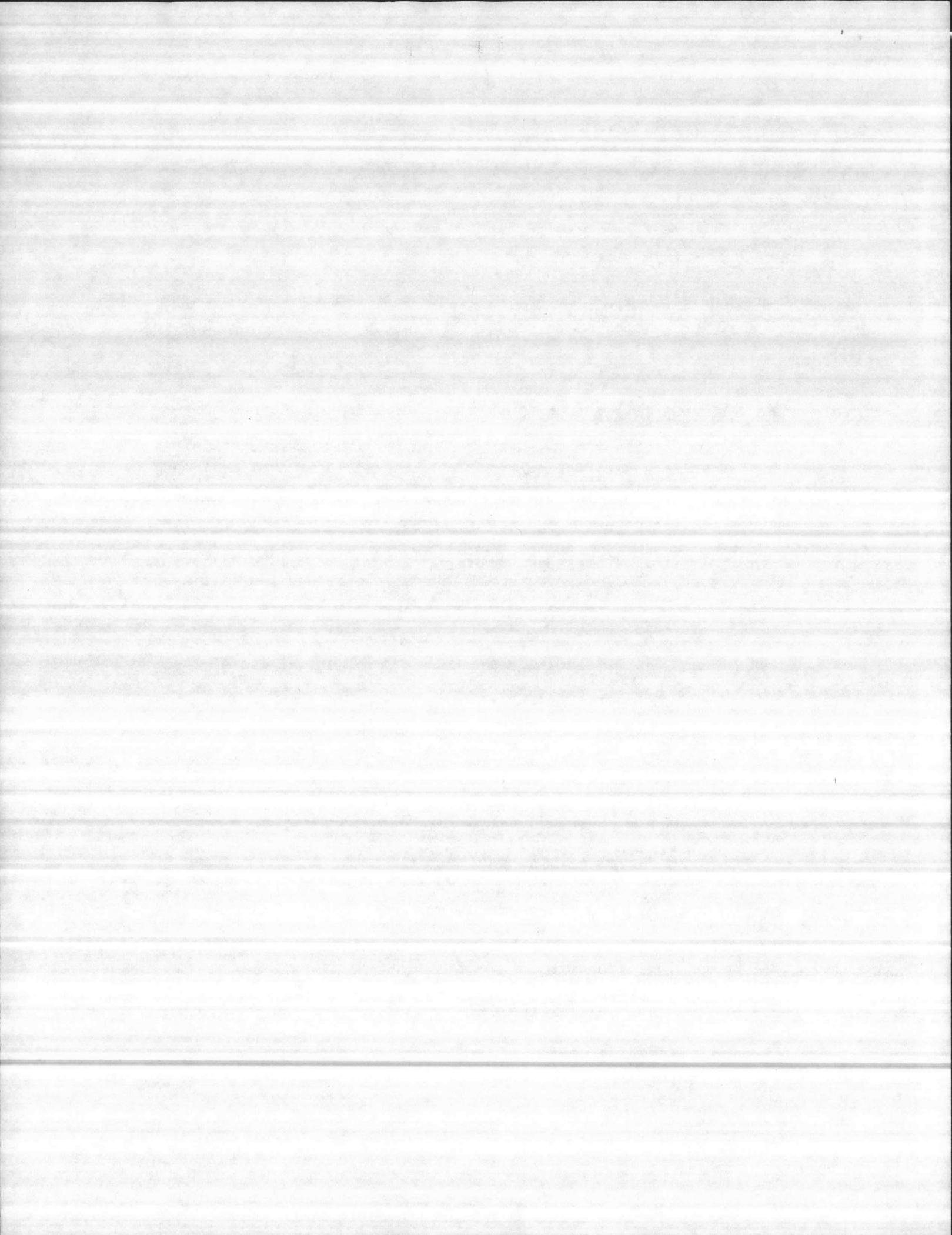
"It is hereby certified that the material/equipment shown and marked in this submittal is that approved to be incorporated into Contract Number NG2470-77-B-7526, is in compliance with the contract drawings and specifications, and can be installed in the allocated spaces, and is approved for use.

1928

THE WALDINGER CORPORATION

Authorized Reviewer [Signature] Date 11-20-79

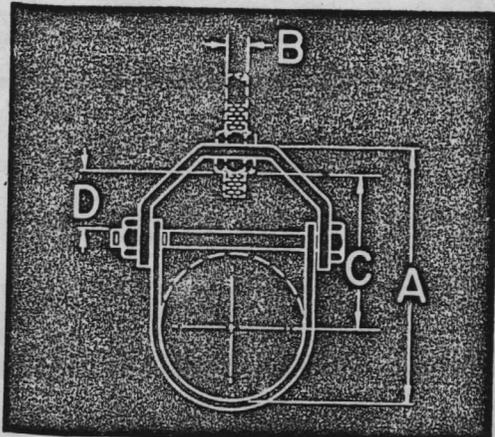
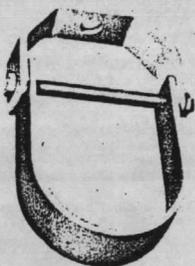
Signature CQC Rep [Signature] Date 11-26-79



39

## Clevis Hanger

Figure 12



- MATERIAL:** Steel
- FUNCTION:** Hanger is designed to permit hanging of top yoke, positioning pipe, then securing bottom of hanger.
- APPROVALS:** Underwriters' Laboratory and Factory Mutual, 3/4 thru 8 inch. Conforms to Federal Specification WW-H-171D, type 1, 3/4 thru 20 inch and Manufacturers Standardization Society SP-69, type 1
- COMPONENTS:** Top yoke, bottom strap and bolt with nut—assembled.
- FINISH:** ~~Paint~~, electro galvanized ~~Paint~~ available 1/2 thru 8 inch sizes.
- ORDER BY:** Figure number, pipe size and finish.

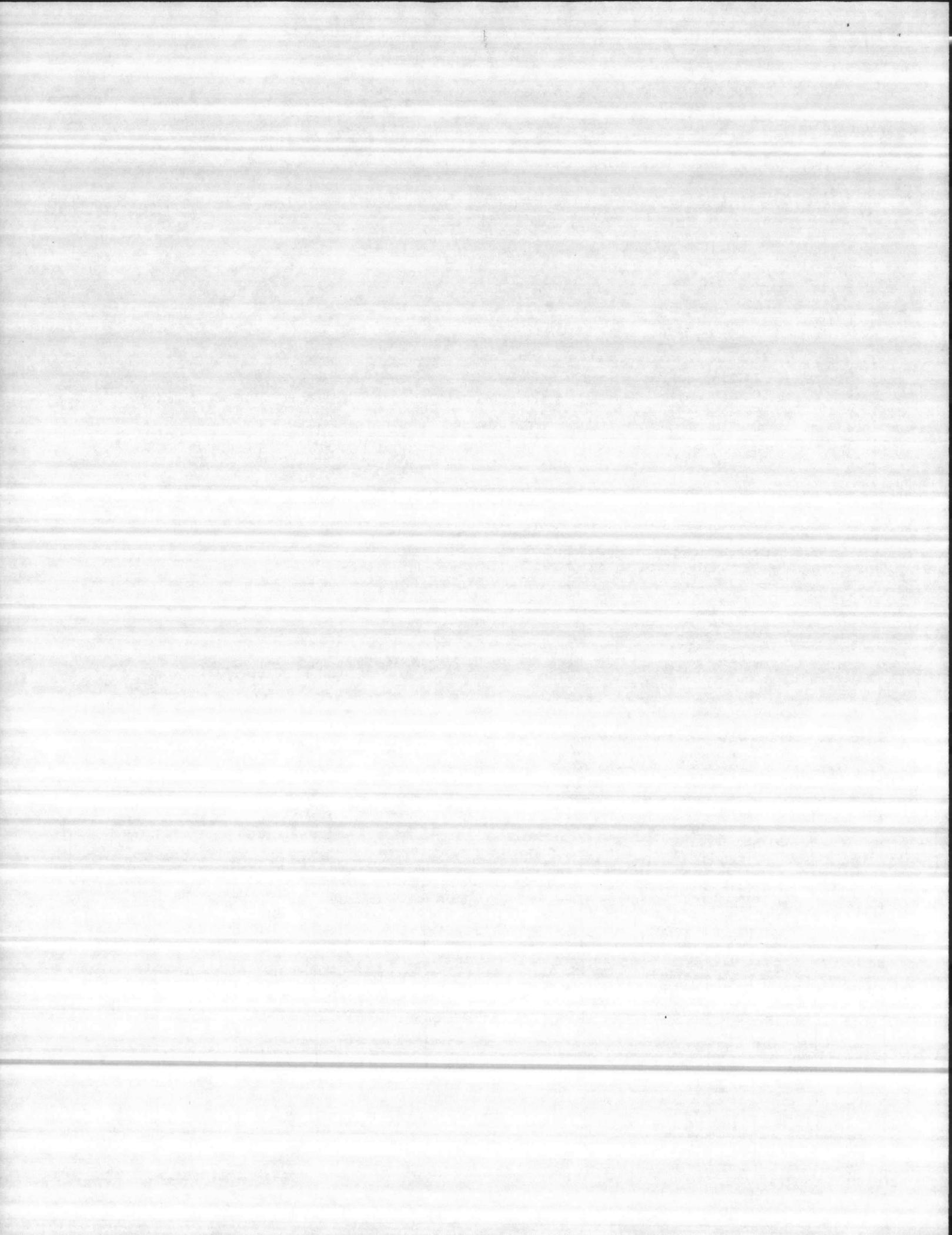
NOTE: Where pipe smaller than nominal clevis size is used, a pipe spacer should be placed over the clevis bolt to prevent closing of lower strap.

1928



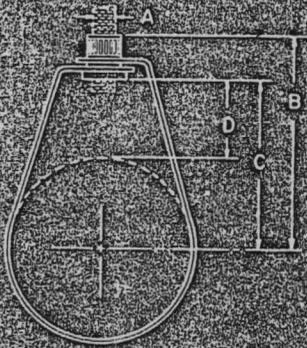
PIPE SIZE	A	B	C	D	BOLT SIZE	TOP STOCK SIZE	BOTTOM STOCK SIZE	LOAD RATING LBS.	STD. PKG.	APPROX. WEIGHT PER 100
1/2	2-1/2	3/8	1-9/16	5/8	1/4	1/8 x 1	1/8 x 1	610	25	33
3/4	2-13/16	3/8	1-3/4	3/4	1/4	1/8 x 1	1/8 x 1	610	25	36
1	3	3/8	1-7/8	13/16	1/4	1/8 x 1	1/8 x 1	610	25	39
1-1/4	3-5/8	3/8	2-1/4	1-1/16	1/4	1/8 x 1	1/8 x 1	610	25	46
1-1/2	4-1/2	3/8	3	1-5/8	1/4	1/8 x 1	1/8 x 1	610	25	54
2	4-5/8	3/8	2-15/16	1-5/16	1/4	1/8 x 1	1/8 x 1	610	25	58
2-1/2	5-11/16	1/2	3-5/8	1-1/2	3/8	3/16 x 1-1/4	3/16 x 1-1/4	1130	Bulk	135
3	6-5/16	1/2	3-15/16	1-7/16	3/8	3/16 x 1-1/4	3/16 x 1-1/4	1130	Bulk	143
3-1/2	7-3/16	1/2	4-9/16	1-3/4	3/8	3/16 x 1-1/4	3/16 x 1-1/4	1130	Bulk	164
4	8-3/16	5/8	5	1-3/4	3/8	1/4 x 1-1/4	3/16 x 1-1/4	1430	Bulk	204
5	9-13/16	5/8	6-1/8	2-1/8	1/2	1/4 x 1-1/4	3/16 x 1-1/4	1430	Bulk	256
6	11-1/4	3/4	7-1/16	2-9/16	1/2	1/4 x 1-1/2	3/16 x 1-1/2	1940	Bulk	336
8	14-3/16	7/8	8-13/16	2-15/16	5/8	1/4 x 1-3/4	3/16 x 1-3/4	2000	Bulk	534
10	16-7/16	7/8	9-7/8	2-1/2	3/4	3/8 x 1-3/4	1/4 x 1-3/4	3600	Bulk	946
12	18-5/8	7/8	11-1/16	2-15/16	3/4	3/8 x 2	1/4 x 2	3800	Bulk	1191
14	20-7/8	1	12-7/16	3-1/16	7/8	1/2 x 2	1/4 x 2	4200	Bulk	1571
16	23-5/16	1	13-7/8	3-1/16	7/8	1/2 x 2-1/2	1/4 x 2-1/2	4600	Bulk	1947
18	25-1/4	1-1/8	14-11/16	2-15/16	7/8	1/2 x 2-1/2	1/4 x 2-1/2	4800	Bulk	2267
20	29-5/16	1-1/4	17-3/8	4-3/16	1	5/8 x 3	3/8 x 3	4800	Bulk	4182
24	33-11/16	1-1/2	19-5/8	3-3/4	1	5/8 x 3	3/8 x 3	4800	Bulk	5242
30	41-7/16	1-1/2	24-3/8	4-3/4	1-1/4	5/8 x 3	1/2 x 3	4800	Bulk	7863

\*Safety factor of 5



## E-Z Grip Hanger

## Figure 89



**MATERIAL:** Steel

**FUNCTION:** Hanger with socket for adjustment after installation. Boss on socket keeps socket from falling out of hanger; if socket is to be removed, socket can be turned to align boss with notch in hanger

**APPROVALS:** Underwriters' Laboratory and Factory Mutual, 3/4 thru 8 inch. Conforms to Federal Specification WW-H-171D, type 10, 1/2 thru 8 inch and Manufacturers Standardization Society SP-69, type 10

**COMPONENTS:** Band and socket—assembled

**FINISH:** Electro galvanized

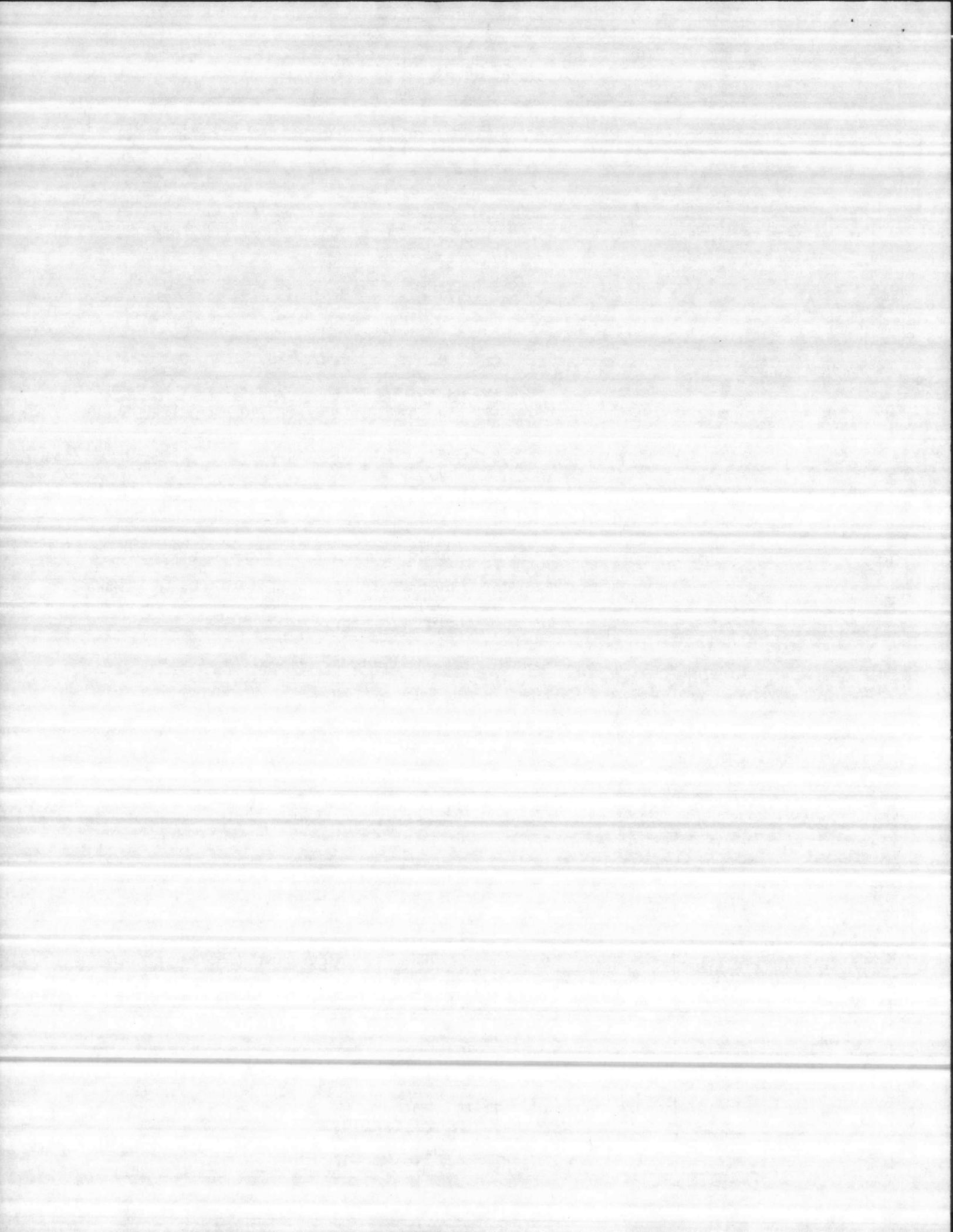
**ORDER BY:** Figure number and size

928 1928



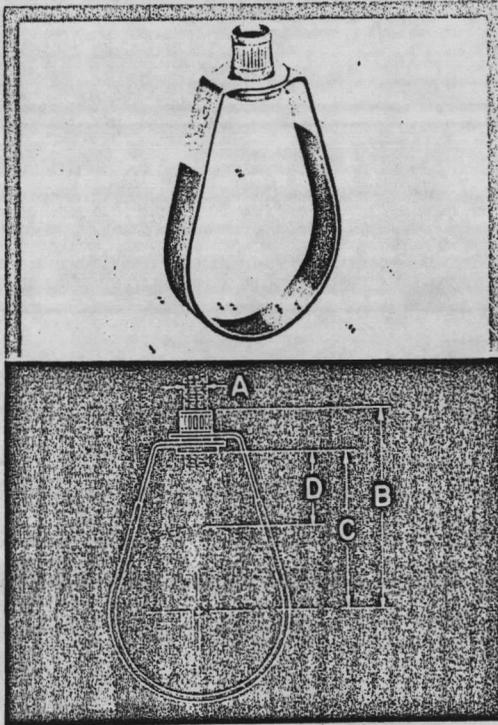
PIPE SIZE	A	B	C	D	STOCK SIZE	LOAD RATING LBS.* 650°F	STANDARD PACKAGE	APPROX. WEIGHT PER 100
1/2	3/8	2-5/16	1-7/16	1	16 ga. x 5/8	400	100	9
3/4	3/8	2-7/16	1-1/2	1	16 ga. x 5/8	400	100	9
1	3/8	2-1/2	1-5/8	1	16 ga. x 5/8	400	100	10
1-1/4	3/8	2-3/4	1-7/8	1	16 ga. x 5/8	400	100	11
1-1/2	3/8	2-7/8	2	1	16 ga. x 5/8	400	100	11
2	3/8	3-5/16	2-7/16	1-1/4	16 ga. x 5/8	400	100	13
2-1/2	1/2	3-15/16	2-15/16	1-1/2	13 ga. x 3/4	650	50	34
3	1/2	4-1/4	3-1/4	1-1/2	13 ga. x 3/4	650	50	36
3-1/2	1/2	4-1/2	3-1/2	1-1/2	13 ga. x 3/4	650	25	40
4+	5/8	5-3/4	4-1/4	2	11 ga. x 1	1250	25	88
5+	5/8	6-5/16	4-13/16	2-1/16	11 ga. x 1	1250	10	99
6+	3/4	6-7/8	5-3/8	2-1/16	11 ga. x 1	1250	10	106
8+	7/8	8-9/16	6-15/16	2-5/8	11 ga. x 1	1250	10	129

\*Safety factor of 5  
 +These Sizes are Provided with Hinge at Bottom



## E-Z Grip Protective Hanger

Figure 91



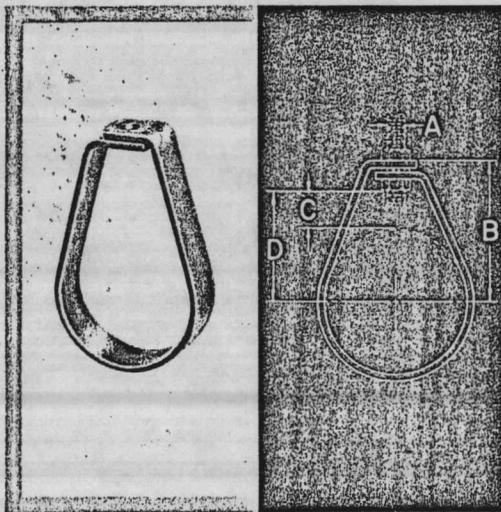
**MATERIAL:** Steel  
**FUNCTION:** Equivalent to Figure 89 except P.V.C. coated for protection of glass pipe. Will withstand temperatures of 275°F.  
**APPROVALS:** Conforms to Federal Specification WW-H-171D, type 10, 1/2 thru 8 inch and Manufacturers Standardization Society SP-69, type 10  
**COMPONENTS:** Band and socket—assembled  
**FINISH:** Electro galvanized then P.V.C. coated  
**ORDER BY:** Figure number and size

PIPE SIZE	A	B	C	D	STOCK SIZE	LOAD RATING LBS.*	STD. PKG.	APPROX. WEIGHT PER 100
1/2	3/8	2-5/16	1-7/16	1	16 ga. x 5/8	400	100	11
3/4	3/8	2-7/16	1-1/2	1	16 ga. x 5/8	400	100	11
1	3/8	2-1/2	1-5/8	1	16 ga. x 5/8	400	100	12
1-1/4	3/8	2-3/4	1-7/8	1	16 ga. x 5/8	400	100	13
1-1/2	3/8	2-7/8	2	1	16 ga. x 5/8	400	100	13
2	3/8	3-5/16	2-7/16	1-1/4	16 ga. x 5/8	400	100	15
2-1/2	1/2	3-15/16	2-15/16	1-1/2	13 ga. x 3/4	650	50	36
3	1/2	4-1/4	3-1/4	1-1/2	13 ga. x 3/4	650	50	38
3-1/2	1/2	4-1/2	3-1/2	1-1/2	13 ga. x 3/4	650	25	42
4	5/8	5-3/4	4-1/4	2	11 ga. x 1	1250	25	90
5	5/8	6-5/16	4-13/16	2-1/16	11 ga. x 1	1250	10	101
6	3/4	6-7/8	5-3/8	2-1/16	11 ga. x 1	1250	10	108
8	7/8	8-9/16	6-15/16	2-5/8	11 ga. x 1	1250	10	131

\*Safety factor of 5

## Pear Shaped Hanger

Figure 13



**MATERIAL:** Steel  
**FUNCTION:** For supporting standard pipe. Hanger can be adjusted after installation.  
**APPROVALS:** Factory mutual, 3/4 thru 8 inch. Conforms to Federal Specification WW-H-171D, type 7, 3/4 thru 8 inch and Manufacturers Standardization Society SP-69, type 7.  
**FINISH:** Plain  
**ORDER BY:** Figure number and size

PIPE SIZE	A	B	C	D	STOCK SIZE	LOAD RATING LBS.* 650°F	STD. PKG.	APPROX. WEIGHT PER 100
3/6 3/4	3/8	2-5/8	1-1/2	2-1/8	16 ga. x 1	610	25	16
54 1	3/8	2-3/4	1-1/2	2-1/4	16 ga. x 1	610	25	17
67 1-1/4	3/8	3	1-7/16	2-3/8	1/8 x 1	610	25	39
69 1-1/2	3/8	3-1/8	1-7/16	2-1/2	1/8 x 1	610	25	41
72 2	3/8	3-3/8	1-1/2	2-3/4	1/8 x 1	610	25	46
78 2-1/2	1/2	4	1-3/4	3-1/4	1/8 x 1	970	25	53
81 3	1/2	4-1/16	1-7/16	3-5/16	1/8 x 1	970	25	57
84 3-1/2	1/2	4-1/4	1-3/8	3-1/2	1/8 x 1	970	25	63
119 4	5/8	5-1/8	1-13/16	4-3/16	1/8 x 1-1/4	1250	10	92
127 5	5/8	5-11/16	1-13/16	4-3/4	1/8 x 1-1/4	1250	10	104
218 6	3/4	6-1/2	1-15/16	5-3/8	3/16 x 1-1/4	1800	10	187
312 8	7/8	7-7/16	1-3/4	6-3/16	3/16 x 1-1/2	1800	Bulk	268

\*Safety factor of 5

\*Sa  
+T

