

April 10, 2017

Attention: Emma Smith
AAONE
PO BOX 91072
BURNHAMTHORPE PO
TORONTO, ON M9C 5N5

Email: aaone@rogers.com

The design submission, tracking number 2017-01760, originally received on March 22, 2017 was surveyed and accepted for registration as follows:

CRN : 0H11517.52 **Accepted on:** April 10, 2017
Reg Type: Addition to Acc. Fitting **Expiry Date:** March 21, 2027
Drawing No. : CDF1000,R.C;D214,R.H;D214A,R.L;D215,R.D;D215A,R.H
Fitting type: PUMP TRAPS CRN RENEWAL
Design registered in the name of : ARMSTRONG INTERNATIONAL INC

Description	MAWP	Design Temperature	MDMT
Internal Pressure	689kPa	208 °C	-29 °C

The registration is conditional on your compliance with the following notes:

As indicated on AB-41 Statutory Declaration form and submitted documentation, the code of construction is ASME B31.3.

This registration is valid only for fittings fabricated at the location(s) covered by the QC certificate attached to the accepted AB-41 Statutory Declaration form.

This registration is valid only until the indicated expiry date and only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency until that date.

Should the approval of the quality management system lapse before the expiry date indicated above, this registration shall become void.

An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.

Enclosed are stamped prints for your reference.

Sincerely,



GRYNCHUK, MILLA



the pressure equipment safety authority

STATUTORY DECLARATION Registration of Fittings

In this space, show facsimile of manufacturer's logo or trademark as it will appear on the fitting.



I, Jonathan Hubbard,

Quality Assurance Manager

(company title, e.g. vice president, plant manager, chief engineer) (must be in a position of authority)

of Armstrong International, Inc

(name of manufacturer)

located at 816 Maple St., Three Rivers, MI 49093 USA

(plant address)

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act (check one)

- ☒ comply with the requirements of ASME B31.1 & B31.3 which specifies the dimensions, (title of recognized North American Standard) materials of construction, pressure/temperature ratings and identification marking of the fittings, or
- ☐ are not covered by the provisions of a recognized North American standard and are therefore manufactured to comply with _____ as supported by the attached data which identifies the dimensions, materials of construction, pressure/temperature ratings and the basis for such ratings, and the marking of the fittings for identification.

I further declare that the manufacture of these fittings is controlled by a quality control program which has been verified by the following authority, HSB Registration Services as being suitable for the manufacture of these fittings to the stated standard. The fittings covered by this declaration, for which I seek registration, are category H

In support of this application, the following information, calculations and/or test data are attached:

See page 2 for listing

DECLARED before me at Three Rivers in the County of St. Joseph
this 15th February 2017
(print) ROBERTA M. RYAN (Year)
Notary Public, St. Joseph Co., (Month)
My Commission Expires Sept. 13, 2018
(sign) Jonathan Hubbard
(A Commissioner for Oaths) (Signature of Applicant)

For Office Use Only

To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act, B51, Clause 4.2, and is accepted for registration in Category H

Registration Number: OH 11517.52

Date Registered: APR 10 2017

(For the Administrator/Chief Inspector of Alberta)

Expiry Date: _____



Armstrong International, Inc.

816 Maple Street, Three Rivers, Michigan 49093 USA Phone: (269) 273-1415 Fax: (269) 278-6555

Page 2 (Continued from ABSA Statutory Declaration)

The scope of the registration and the design parameters of the pressure boundary, such as the pressure and temperature, of this CRN renewal submission are the same as the original approved CRN submission.

In support of the application, the following information and/or test data are attached as follows:

D214 body casting, D214A body machined, D215 cap casting, D215A cap machined, CDF1000 assembly, tensile test reports, burst test reports, burst calculation.

0411517.52

Intelligent System Solutions STEAM AIR HOT WATER

www.armstronginternational.com

DIMENSIONS & DATA CERTIFIED FOR:

Representative:

Order:

Customer:

Order:

Project:

Requirements:

ADXA
SAFETY CODES ACT - PROVINCE OF ALBERTA
REGISTRATION OF FITTINGS

0H11517.52

REGISTRATION NO.

DWG. NO. OF CAT. NO.

TYPE OF FITTINGS

APR 10 2017
Date

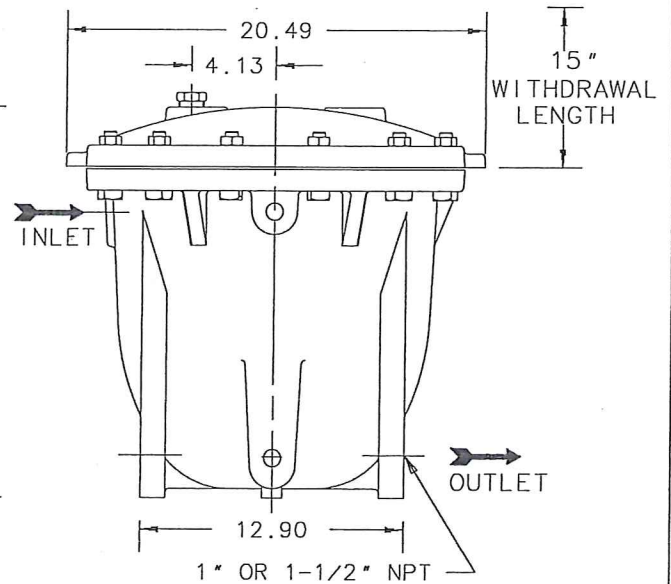
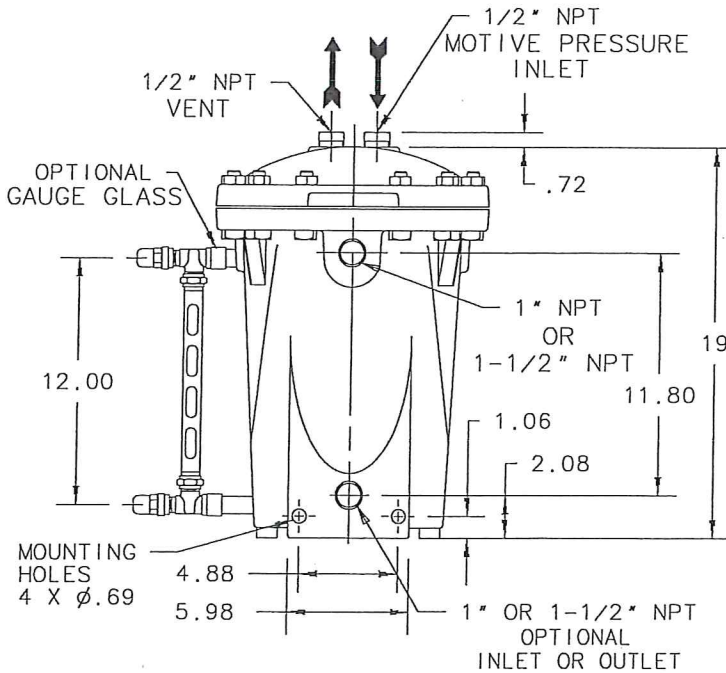
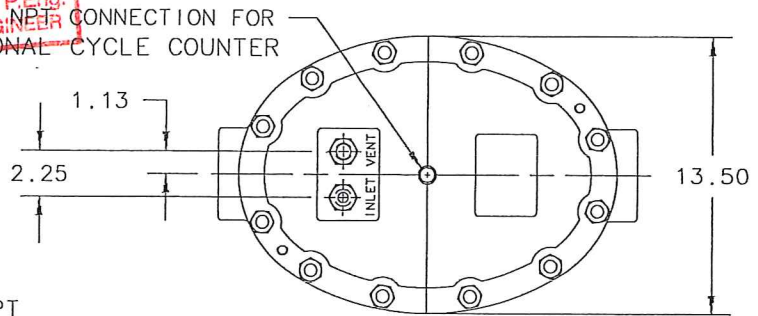
INITIALS

MILLA GRYNCHILSK, P.Eng.
DESIGN SURVEY ENGINEER


By:

Date:

CD-100, P.C. 2214, R.4, 2214A, 2215, RD-2215A, R.4
Pump Traps Removal



(OVER)


 Armstrong Condensate Management Group Three Rivers, MI. 49093 Telephone (269) 279-3601 Fax (269) 279-3150		
Armstrong Posted on www.armstronginternational.com		
Product	CDF No.	Date
PUMPING TRAP PT-204 & PT-206	CDF1000	12/06/06
		Rev. C

Matt McNamara

Tue Feb 27 16:05:47 EST 2007

LIST OF MATERIALS	
NAME OF PART	MATERIAL
Body and Cap	Cast Iron ASTM A48 Class 30
Cap Gasket	Compressed Non-Asbestos
Bolts	SA-449 STEEL
Nuts	ASTM A194 Grade 2H
Inlet Valve Assembly	Stainless Steel
Vent Valve Assembly	Stainless Steel
Valve Assembly Washers	Zinc Plated Steel
Plug	Cast Iron
Mechanism Assembly (including float and springs)	Stainless Steel

OPTIONS	
1.	Check valves should be ordered as an option with the Pumping Trap. Inlet check valve is 1" NPT (1-1/2" NPT for PT-206) bronze swing check valve with teflon disc, Class 150 (minimum). Body material per ASTM B62. Outlet check valve is 1" NPT (1-1/2" NPT for PT-206) bronze lift check valve, Class 150 (minimum). Body material per ASTM B62.
2.	Armored gauge glass. Maximum allowable pressure 250 psig at 425°F. This exceeds Pumping Trap design of 100 psig at 406°F.
3.	Cycle counter.
4.	Insulation jacket.
INSTALLATION NOTES	
1.	The appropriate size and style check valves must be installed on the supply and discharge sides of the Pumping Trap for it to operate.
2.	A minimum 6" vertical filling head is recommended from the equipment drain point to the top of the pump cap.
3.	Liquid flowing from the equipment being drained must be stored during the pump's discharge cycle. A liquid reservoir or vented receiver should be installed in a horizontal plane to prevent flooding of equipment.

 Armstrong Fluid Handling, Inc. Three Rivers, MI. 49093 Telephone (269) 278-6500 Fax (269) 279-3150 Posted on Armstrong's homepage www.armstrong-intl.com		
Product	CDF No.	Date
PUMP TRAP PT-204 & PT-206	CDF1000	11/07/96
		Rev. B

FOUNDRY 1 D.
& DATE CODE
& LETTERING 1/4"
TO 3/4" TALL
RAISED 1/16 MAX.

$\phi 1.00$

20°
2 PLS

R11.75
TYP

3.50

XXXX

3.50

1.4

5.63
TYP

.66

5 PLS

PATTERN NO.
D214
LETTERING 1"
TALL, RAISED
1/16 MAX.

$\phi 1.00$

16.25 ± .12

3.64

70°

R1.12

R1.12

PARTING LINE

FULL RADIUS

R10.63

1.24

'X'

R12.37

7.40

'A'

'B'

5.6

R5.75 TYP

R3.92 TYP

SMA	W	H	D
F	H	N	B
G	N	B	E
H	B	E	T

FOUNDRY 1 D.
& DATE CODE
& LETTERING 1/4"
TO 3/4" TALL
RAISED 1/16 MAX.

$\phi 1.00$

20°
2 PLS

R11.75
TYP

3.50

XXXX

3.50

1.4

5.63
TYP

.66

5 PLS

PATTERN NO.
D214
LETTERING 1"
TALL, RAISED
1/16 MAX.

$\phi 1.00$

16.25 ± .12

3.64

70°

R1.12

R1.12

PARTING LINE

FULL RADIUS

R10.63

1.24

'X'

R12.37

7.40

'A'

R5.75 TYP

R3.92 TYP

5.6

'B'

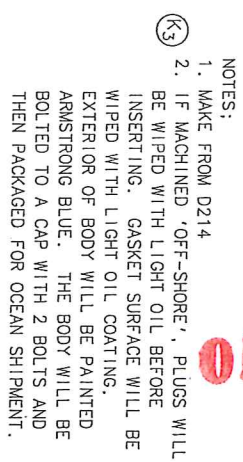
SMA	M	F	G	H
W	H	N	B	D
E	I	L	O	T
A	C	K	J	P

- NOTES:
1. MATL: CAST GRAY IRON, ASTM A48, LATEST ISSUE, CL.30A. ALL REQUIREMENTS OF THE ASTM SPECIFICATION, SHALL BE COMPLIED WITH.
 2. HARDNESS SHALL BE 187 - 241 BHN 3000. EACH LOT MAY BE INSPECTED BY PURCHASER. HARDNESS TEST WILL BE PERFORMED ON FLANGE FACE AFTER CASTING SKIN IS REMOVED.
 3. DIMENSIONS: MAX. DRAFT 3° UNLESS OTHERWISE SPECIFIED. ALL CORNERS AND ALL FILLETS TO BE R-0.19°.
 4. TOLERANCES, UNLESS OTHERWISE SPECIFIED, CASTING DIMS. ARE ± 0.08 °
 5. MAX. MISALIGNMENT OF COPE & DRAG 0.04°
 6. EACH PIECE MAY BE INSPECTED BY PURCHASER. THE WIDTH OF THE FLANGE 'X' AND 'Y' SHALL VARY FROM EACH OTHER NO MORE THAN 0.08°
 7. PHYSICAL PROPERTIES CERTIFICATION REQUIRED FOR EACH LOT.
 8. CHEMICAL ANALYSIS WILL BE SUPPLIED WHEN REQUESTED.
 9. HEAT CODE (DATE STAMP), PATTERN NUMBER AND FOUNDRY I.D. SHALL BE LOCATED AS INDICATED ON THE DRAWING.
 10. FOR A COMPLETE DEFINITION OF ALL PART FEATURES, THE PATTERN MAKER MUST HAVE/REVIEW THE SOLID MODEL, DRAWING, DO NOT MAKE MAJOR PATTERN CHANGES (OTHER THAN NORMAL MAINTENANCE AND REPAIR) WITHOUT THE SOLID MODEL, UNLESS SPECIFICALLY APPROVED BY ARMSTRONG INTERNATIONAL, INC.
 11. APPROXIMATE CASTING WT., 130 lbs.
 12. INCLUDING CONVEXITY AND WARP.
- SECTION A - A
- SECTION B - B

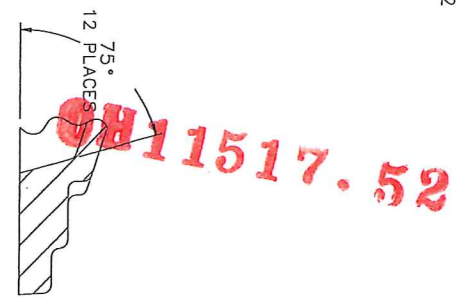
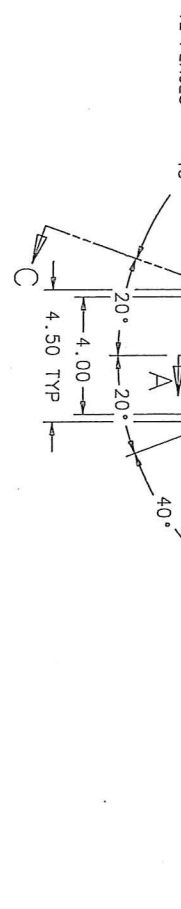
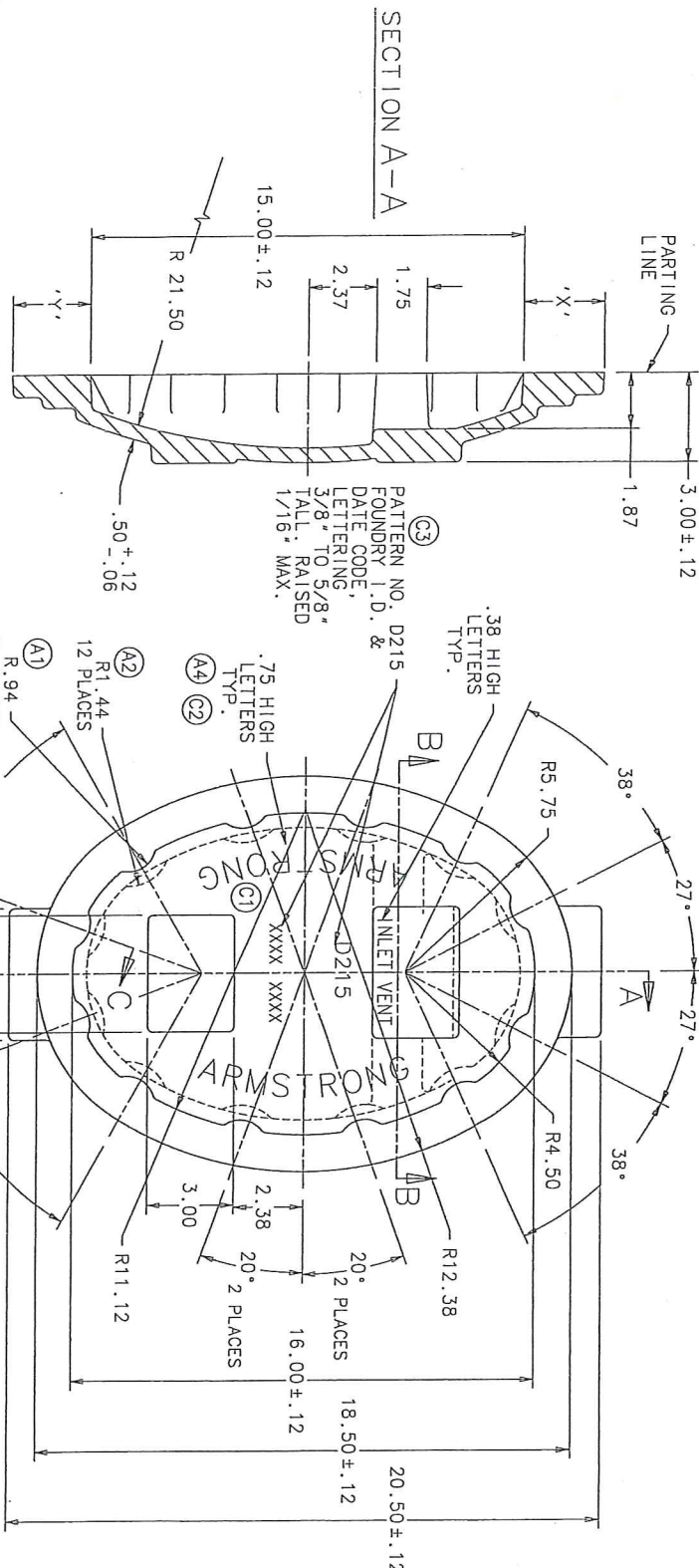
SECTION B - B

[illegible]

SYN	REV/SIONS	C/N NO.	BT-DATE
H	MAJOR REY OF DMC SEE HISTORY DMC. // DCM74 FOR REF	CN9419	DDH DDM/24/02
J	1. WAS: 2.50 2. WAS: 1.50 3. WAS: 1.50	CN9596	DL 2010/10/0
K	1. WAS 13.0 ONLY 2. ADDED 25.0 ONLY 3. ADDED NOTE 2.	CN9824	R.H 4-28-04
L	1. WAS 15.1 2. WAS 2.38	CN10645	D.F 05-01-06

[illegible]

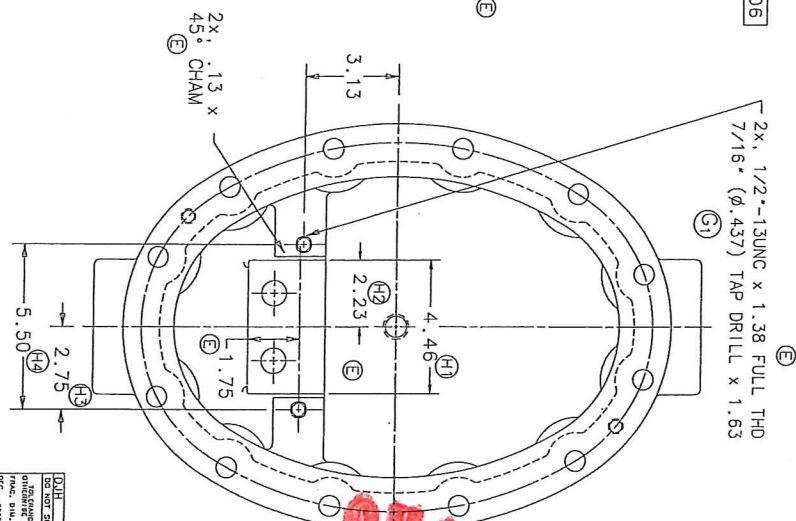
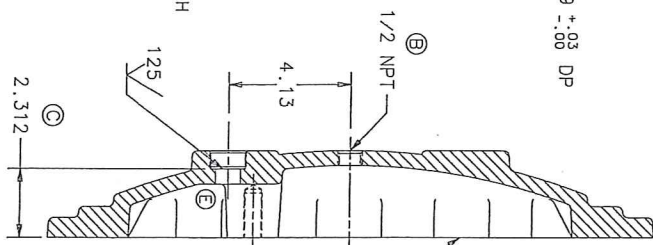
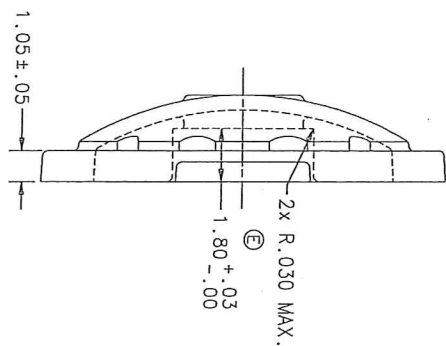
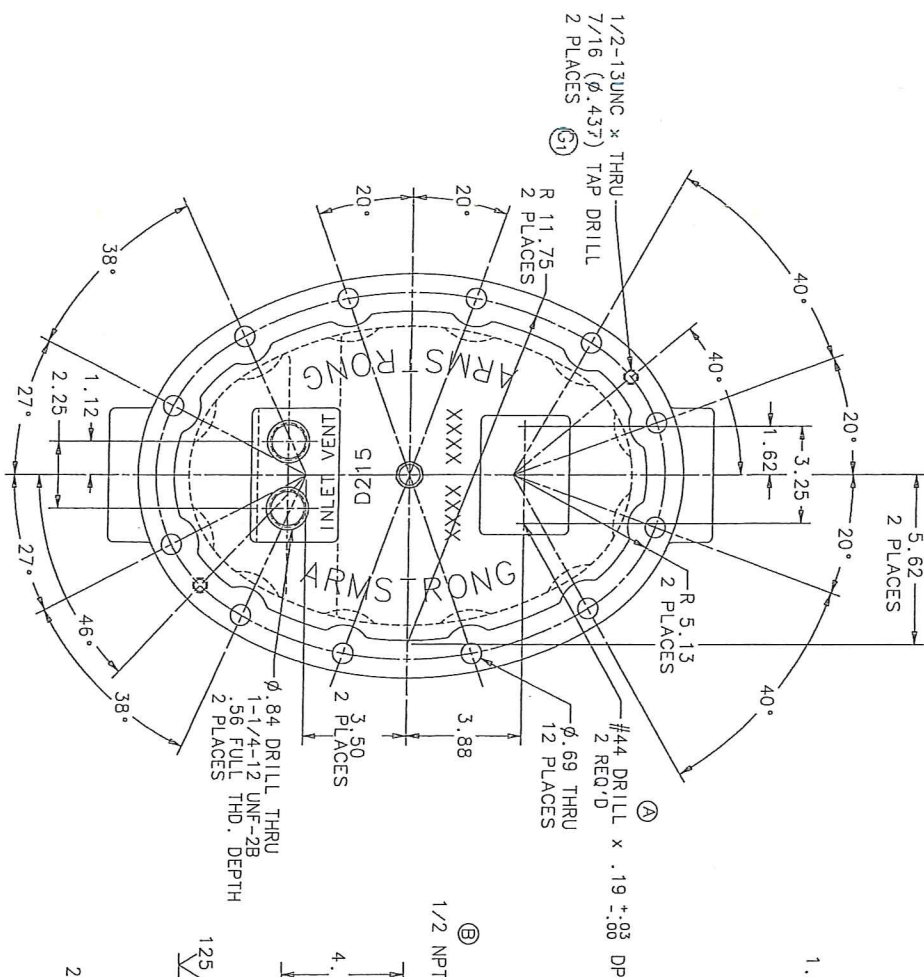
REV.	DESCRIPTION	DATE	BY	CHKD
1	ADDED 15/16 R. 12 PLACES			
2	ADDED 1-7/16 R. 12 PLACES			
3	ADDED 3/8" HIGH LETTERING			
4	ADDED 1-7/16 R. 12 PLACES			
5	ADDED 3/8" HIGH LETTERING			
6	ADDED 1-7/16 R. 12 PLACES			
7	ADDED 3/8" HIGH LETTERING			
8	ADDED 1-7/16 R. 12 PLACES			
9	ADDED 3/8" HIGH LETTERING			
10	ADDED 1-7/16 R. 12 PLACES			
11	ADDED 3/8" HIGH LETTERING			
12	ADDED 1-7/16 R. 12 PLACES			
13	ADDED 3/8" HIGH LETTERING			
14	ADDED 1-7/16 R. 12 PLACES			
15	ADDED 3/8" HIGH LETTERING			
16	ADDED 1-7/16 R. 12 PLACES			
17	ADDED 3/8" HIGH LETTERING			
18	ADDED 1-7/16 R. 12 PLACES			
19	ADDED 3/8" HIGH LETTERING			
20	ADDED 1-7/16 R. 12 PLACES			
21	ADDED 3/8" HIGH LETTERING			
22	ADDED 1-7/16 R. 12 PLACES			
23	ADDED 3/8" HIGH LETTERING			
24	ADDED 1-7/16 R. 12 PLACES			
25	ADDED 3/8" HIGH LETTERING			
26	ADDED 1-7/16 R. 12 PLACES			
27	ADDED 3/8" HIGH LETTERING			
28	ADDED 1-7/16 R. 12 PLACES			
29	ADDED 3/8" HIGH LETTERING			
30	ADDED 1-7/16 R. 12 PLACES			
31	ADDED 3/8" HIGH LETTERING			
32	ADDED 1-7/16 R. 12 PLACES			
33	ADDED 3/8" HIGH LETTERING			
34	ADDED 1-7/16 R. 12 PLACES			
35	ADDED 3/8" HIGH LETTERING			
36	ADDED 1-7/16 R. 12 PLACES			
37	ADDED 3/8" HIGH LETTERING			
38	ADDED 1-7/16 R. 12 PLACES			
39	ADDED 3/8" HIGH LETTERING			
40	ADDED 1-7/16 R. 12 PLACES			
41	ADDED 3/8" HIGH LETTERING			
42	ADDED 1-7/16 R. 12 PLACES			
43	ADDED 3/8" HIGH LETTERING			
44	ADDED 1-7/16 R. 12 PLACES			
45	ADDED 3/8" HIGH LETTERING			
46	ADDED 1-7/16 R. 12 PLACES			
47	ADDED 3/8" HIGH LETTERING			
48	ADDED 1-7/16 R. 12 PLACES			
49	ADDED 3/8" HIGH LETTERING			
50	ADDED 1-7/16 R. 12 PLACES			
51	ADDED 3/8" HIGH LETTERING			
52	ADDED 1-7/16 R. 12 PLACES			
53	ADDED 3/8" HIGH LETTERING			
54	ADDED 1-7/16 R. 12 PLACES			
55	ADDED 3/8" HIGH LETTERING			
56	ADDED 1-7/16 R. 12 PLACES			
57	ADDED 3/8" HIGH LETTERING			
58	ADDED 1-7/16 R. 12 PLACES			
59	ADDED 3/8" HIGH LETTERING			
60	ADDED 1-7/16 R. 12 PLACES			
61	ADDED 3/8" HIGH LETTERING			
62	ADDED 1-7/16 R. 12 PLACES			
63	ADDED 3/8" HIGH LETTERING			
64	ADDED 1-7/16 R. 12 PLACES			
65	ADDED 3/8" HIGH LETTERING			
66	ADDED 1-7/16 R. 12 PLACES			
67	ADDED 3/8" HIGH LETTERING			
68	ADDED 1-7/16 R. 12 PLACES			
69	ADDED 3/8" HIGH LETTERING			
70	ADDED 1-7/16 R. 12 PLACES			
71	ADDED 3/8" HIGH LETTERING			
72	ADDED 1-7/16 R. 12 PLACES			
73	ADDED 3/8" HIGH LETTERING			
74	ADDED 1-7/16 R. 12 PLACES			
75	ADDED 3/8" HIGH LETTERING			
76	ADDED 1-7/16 R. 12 PLACES			
77	ADDED 3/8" HIGH LETTERING			
78	ADDED 1-7/16 R. 12 PLACES			
79	ADDED 3/8" HIGH LETTERING			
80	ADDED 1-7/16 R. 12 PLACES			
81	ADDED 3/8" HIGH LETTERING			
82	ADDED 1-7/16 R. 12 PLACES			
83	ADDED 3/8" HIGH LETTERING			
84	ADDED 1-7/16 R. 12 PLACES			
85	ADDED 3/8" HIGH LETTERING			
86	ADDED 1-7/16 R. 12 PLACES			
87	ADDED 3/8" HIGH LETTERING			
88	ADDED 1-7/16 R. 12 PLACES			
89	ADDED 3/8" HIGH LETTERING			
90	ADDED 1-7/16 R. 12 PLACES			
91	ADDED 3/8" HIGH LETTERING			
92	ADDED 1-7/16 R. 12 PLACES			
93	ADDED 3/8" HIGH LETTERING			
94	ADDED 1-7/16 R. 12 PLACES			
95	ADDED 3/8" HIGH LETTERING			
96	ADDED 1-7/16 R. 12 PLACES			
97	ADDED 3/8" HIGH LETTERING			
98	ADDED 1-7/16 R. 12 PLACES			
99	ADDED 3/8" HIGH LETTERING			
100	ADDED 1-7/16 R. 12 PLACES			



- NOTES:
1. MATL: CAST GRAY IRON, ASTM A48, LATEST ISSUE, CL. 30A. ALL REQUIREMENTS OF THE ASTM SPECIFICATION, SHALL BE COMPLIED WITH.
 2. HARDNESS SHALL BE 187 - 241 BHN 3000. EACH LOT MAY BE INSPECTED BY PURCHASER. HARDNESS TEST WILL BE PERFORMED ON FLANGE FACE AFTER CASTING SKIN IS REMOVED.
 3. DIMENSIONS: MAX. DRAFT 3° UNLESS OTHERWISE SPECIFIED. ALL CORNERS AND ALL FILLETS TO BE R=0.19" MAX. MISALIGNMENT OF COPE & DRAG 0.04" EACH PIECE MAY BE INSPECTED BY PURCHASER. THE WIDTH OF THE FLANGE 'X' AND 'Y' SHALL VARY FROM EACH OTHER NO MORE THAN 0.08" 5. PHYSICAL PROPERTIES CERTIFICATION REQUIRED FOR EACH LOT. 6. CHEMICAL ANALYSIS WILL BE SUPPLIED WHEN REQUESTED. 7. HEAT CODE (DATE STAMP), PATTERN NUMBER AND FOUNDRY I.D. SHALL BE LOCATED AS INDICATED ON THE DRAWING. 8. FOR A COMPLETE DEFINITION OF ALL PART FEATURES, THE PATTERN MAKER MUST HAVE/REVIEW THE SOLID MODEL DRAWING. DO NOT MAKE MAJOR PATTERN CHANGES (OTHER THAN NORMAL MAINTENANCE AND REPAIR) WITHOUT THE SOLID MODEL UNLESS SPECIFICALLY APPROVED BY ARMSTRONG INTERNATIONAL, INC. 9. APPROXIMATE CASTING WT., 53.10 lbs. 10. INCLUDING CONVEXITY AND WARP.

DATE	2/2/90	BY	1
DESCRIPTION	PUMP TRAP CAP		
DESIGNED BY	ARMSTRONG INTERNATIONAL, INC.		
CASTING	ASTM A48 CL. 30		
REV.	1		
DATE	2/2/90		
DESCRIPTION	PUMP TRAP CAP		
DESIGNED BY	ARMSTRONG INTERNATIONAL, INC.		
CASTING	ASTM A48 CL. 30		
REV.	1		
DATE	2/2/90		
DESCRIPTION	PUMP TRAP CAP		
DESIGNED BY	ARMSTRONG INTERNATIONAL, INC.		
CASTING	ASTM A48 CL. 30		
REV.	1		
DATE	2/2/90		

- NOTES:
1. MAKE FROM D215
 2. IF MACHINED 'OFF-SHORE', PLUGS WILL BE WIPTED WITH LIGHT OIL BEFORE INSERTING. GASKET SURFACE WILL BE WIPTED WITH LIGHT OIL COATING. EXTERIOR OF CAP WILL BE PAINTED ARMSTRONG BLUE. THE CAP WILL BE BOLTED TO A BODY WITH 2 BOLTS AND THEN PACKAGED FOR OCEAN SHIPMENT.



0011517.52

REV	DESCRIPTION	DATE	BY	CHK
A	ADDED: NAME/PLATE HOLES	2288	W.H.	W.H.
B	ADDED: 1/2" NPT THD.	2711	W.H.	W.H.
C	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
D	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
E	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
F	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
G	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
H	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
I	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
J	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.

REV	DESCRIPTION	DATE	BY	CHK
A	ADDED: NAME/PLATE HOLES	2288	W.H.	W.H.
B	ADDED: 1/2" NPT THD.	2711	W.H.	W.H.
C	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
D	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
E	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
F	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
G	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
H	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
I	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.
J	ADDED: 1/2" NPT THD.	2788	W.H.	W.H.