(400)
16 76
21 21 21 21
Ø4-10PL
15 15
M4-4PL
10 10
Ø5-4PL
34 34
10 22 22 22 22 65 80 96 30 31
6mm THICK SCALE 1:2
1-01.1
ALU/MS
1-01.2
MS
Ø4 Ø4
3.6
5 80 5
3mm THICK SCALE 1:2 4REQD
Ø6 Ø4 5
8 REQD
1-01.3
BRS/HALU
1-02.3
6 12 R3
1mm THICK
SOLDER TO 1-02.1
Ø4 7
6 17
18
DETAIL-C
Ø8PF Ø6
2 10
M10
1-02.4
SOLDER TO UNDERSIDE OF 1-02.2
TAKE OVER ALL HOLES FROM 1-02.1
1-03
3 1
Ø38
TAKE OVER ALL HOLES FROM 1-02.1
Ø3
1-04.1
Ø12PF Ø6PF
33 33
SCALE 1:1.5
R25
Ø44PCD
R6 R6
25 25
SCALE 1:1.5
Ø44PCD
Ø38RM
22.5° A
M3 8-22PL
R25
Ø4 20
4 4
DETAIL D
Ø6
23 Ø10RM-2PL
20 15 11 5
15 A 15
7 18 18 7
SOME HIDDEN LINES RMOVED FOR CLARITY
1-02.1
REFER DETAIL-C
4 7
6 17
18
2.5 2.5 2.5 2.5
REFER DETAIL 'D'
REFER OPPOSITE FACE
Ø26 Ø21PCD
E E
1-04.2
Ø10RM
R10
Ø14PF
R20 R20
12 36
7 15 15 7
SCALE 1:1.5
1-04.3
Ø14 Ø8
1-04.6
Ø8 Ø4 3
4 12 4
SOLDER
Ø14 Ø8RM
Ø12PF Ø16
10
SECTION E-E
Ø26 Ø21PCD
Ø3-4PL
SCALE 1:1.5
1-04.4
4 8 14 Ø4
10HEX Ø4RM
6 3
M8 Ø4RM Ø6PF
SOLDER
1-04.5
1-04.7
3 8
M8
7.5 3 15 2.5 2.5 17.5 17.5 2.5 2.5 15 3 7.5
4 21 14 21 4
Ø6 11-2PL
8 8 8
17 17
Ø8 15-2PL
Ø6 15-2PL
M4 7-10PL
14
4 22 22 22 22 4
BOTTEM VIEW
CAVITIES 7mm DEEP
1-04.4 1-04.3 1-04.2 1-04.1
BRS/HALU
SYN
BRS
1-04.7 1-04.5 1-04.6 1-04.5 1-04.7 1-04.6 SYN
1-04.6
88
4 21 21 4
Ø3 Ø8 Ø8 Ø4
TAKE OVER FROM 1-02.1 BOTTEM VIEW
20 28
1mm THICK SCALE 1:1.5
1-02.2
1-02.1
BRS/HALU
1-02.3 1-02.3
1-02.4 1-02.2
4 Ø6 7 Ø6
SECTION A-A SCALE 1 : 1.5
1-03 1-02 1-04
SA-1-101
1-01
SA-1-105
1-05 1-05
SA-1-101
1-05
MS/HALU
BRZ
5 5 4 4
1-05
M5-2PL
2-01.1
BRS
MS
2-01.6
2-01.4
2-01.5
2-012
2-01.3
2-01.4
2-01.4
2-01.5
2-01.4
2-01.3
2-01.4
3.5 3.5 4 3.5 3.5
6PF 6PF
Ø3 Ø3
3 REQD
Ø8CF
2-01.1
Ø10CF
M2.5 Ø3
42 10.5 3.5
SCALE 1:1.5
3PF 3PF
3.5 7
20
6PF 10PF
R6
20
SCALE 1:1.5 2 REQD
3PF
12
Ø3PF
6 REQD 2-01.6
3PF
3.5 6 7
Ø6PF
R6
R4
Ø6PF
R6
R6
20
20
2-01.5
SCALE 1:1.5
2-01.2 Ø3 M2.5
3.5 10.5 42
Ø10CF
SCALE 1:1.5
2-01.3
Ø3
O-RING
32.5
SCALE 1:2
2-02.3
SYN
2 REQD
BRZ/CI/GRA
10
3
Ø38CF Ø32.5 M4
2-02.1
SCALE 1:2
Ø4PF
8
2-02.5
SS
Ø5CF
2-02.2
M4 M5
15
10 159
SS
2-02.4
MS/BRZ
2-01.3
20
SCALE 1:1.5 2 REQD
2 10
4 R3
16 4 R4
M5 10
4 4 4
4 23 31
3.5
Ø4PF
SCALE 1:1.5

NOTES: THIS ENGINE WAS DEVELOPED AND DESIGNED BY J.A.M. DE WAAL.

TITLE
AN EXPERIMENTAL HORIZONTAL STEAM ENGINE USING THE PUSH-PULL (CAT&MOUSE) PRINCIPLE

DRAWING CONTENTS
PARTS ANS ASSEMBLIES

PROJECT No 09D-17-00
JDW DRAUGHTING SERVICES
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PROJECTION
JDWDS
DATE APRIL 2019

MODEL SCALE: 1:1
DWG SCALE: 1:1 @A3 OR AS SHOWN
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SHEET: 02 OF 03 A3 No: 09D-17-00-SHT02

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