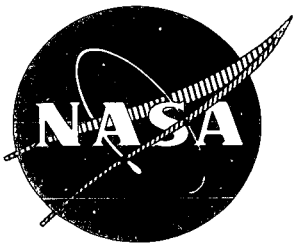
NASA CR-121010



EVALUATION OF CIRCUMFERENTIAL AIRFLOW UNIFORMITY ENTERING COMBUSTORS FROM COMPRESSORS

VOLUME II - DATA SUPPLEMENT

November 1972

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PRATT & WHITNEY AIRCRAFT
FLORIDA RESEARCH AND DEVELOPMENT CENTER

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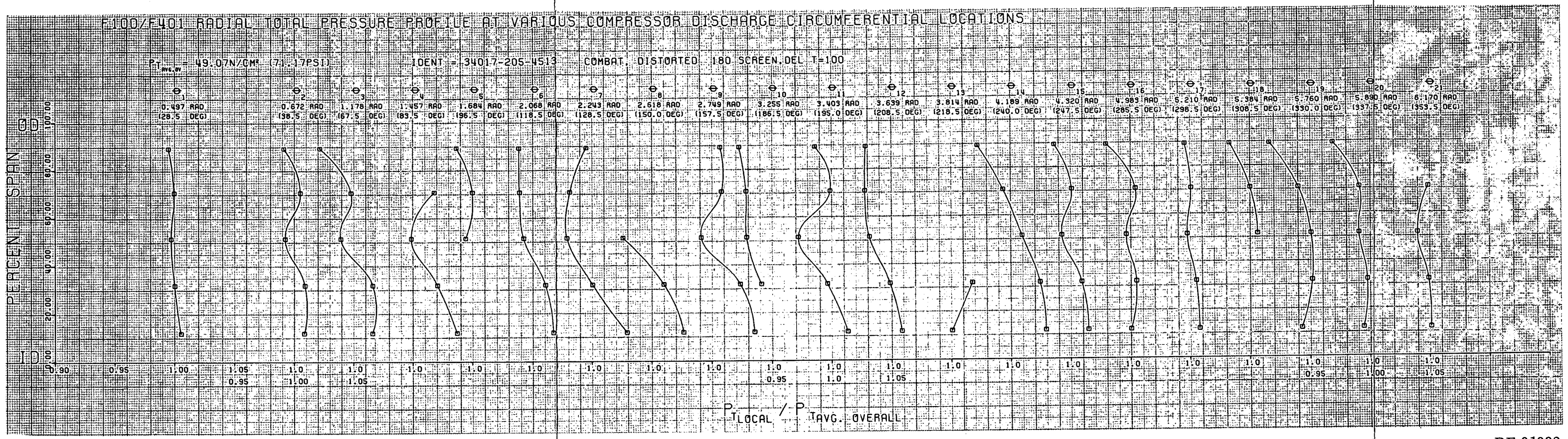
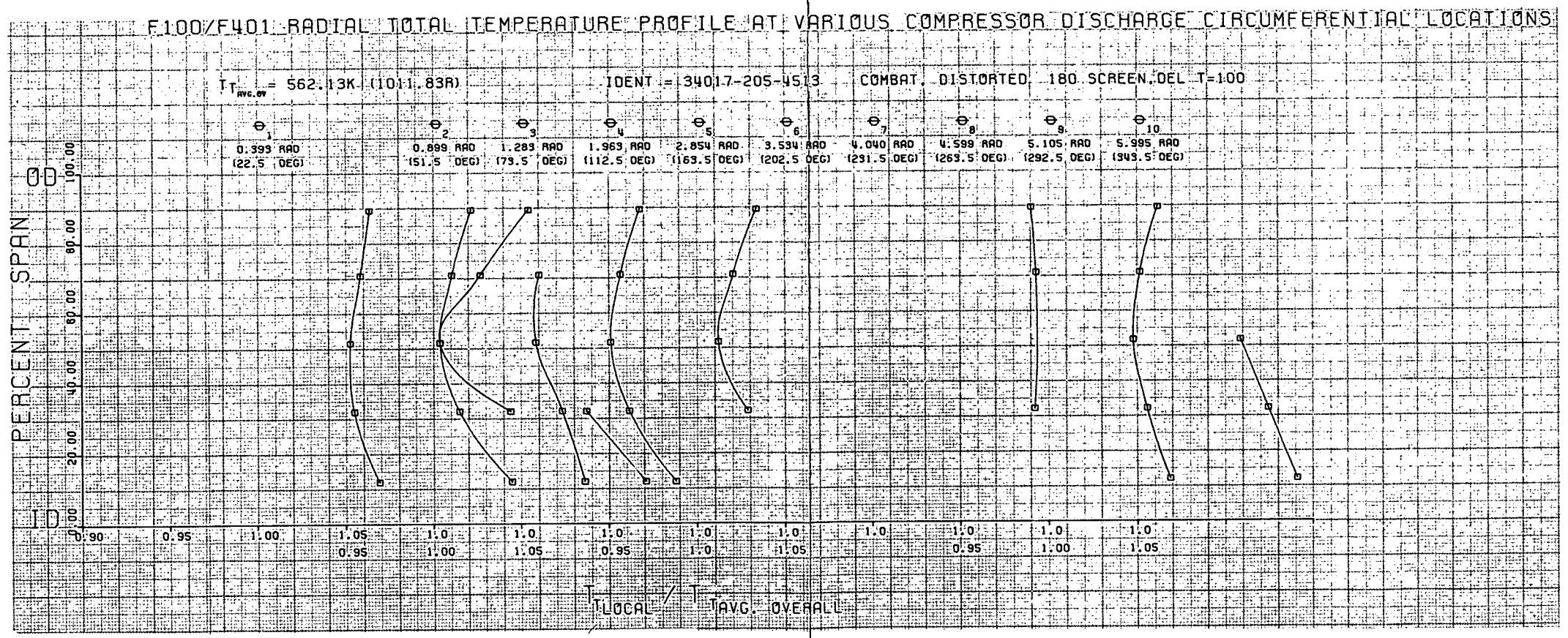


DF 91932



DF 91933

Figure 79.

INPUT DATA FOR RUN NO. 4513

ANGLE RAD. (DEG.)	PT1 - I.D. N/CM**2 (PSIA)	PT2 N/CM**2 (PSIA)	PT3 N/CM**2 (PSIA)	PT4 N/CM**2 (PSIA)	PT5 - O.D. N/CM**2 (PSIA)
0.49(28.5)	49.34(71.56)	49.08(71.18)	48.92(70.96)	49.06(71.15)	48.82(70.81)
0.67(38.5)	49.49(71.78)	49.51(71.82)	48.70(70.63)	49.33(71.55)	48.64(70.55)
1.17(67.5)	49.84(72.29)	49.85(72.31)	48.54(70.41)	48.97(71.02)	47.67(69.14)
1.45(83.5)	50.88(73.80)	50.07(72.62)	49.00(71.07)	49.94(72.43)	0.001 0.00)
1.68(96.5)	0.001 0.00)	0.001 0.00)	48.80(70.77)	49.08(71.18)	48.42(70.23)
2.06(118.5)	49.59(71.93)	49.59(71.93)	48.70(70.64)	48.53(70.39)	48.53(70.36)
2.24(128.5)	50.51(73.26)	49.09(71.21)	48.64(69.68)	48.16(69.86)	48.85(70.85)
2.61(150.0)	50.36(73.00)	49.57(71.89)	47.90(69.47)	0.001 0.00)	0.001 0.00)
2.74(157.5)	50.81(73.69)	50.23(72.85)	48.63(70.54)	49.48(71.76)	49.42(71.69)
3.25(186.5)	0.001 0.00)	48.65(70.56)	48.04(69.68)	48.03(69.66)	47.74(69.24)
3.40(195.0)	48.74(72.14)	48.91(70.94)	47.73(69.22)	49.05(71.14)	48.41(70.22)
3.63(208.5)	49.51(71.81)	49.02(71.11)	48.18(69.89)	48.00(69.63)	48.05(69.69)
3.81(218.5)	49.11(71.24)	49.97(72.48)	0.001 0.00)	0.001 0.00)	0.001 0.00)
4.18(240.0)	50.52(73.28)	50.29(72.94)	49.55(71.87)	48.79(70.76)	47.75(69.26)
4.31(247.5)	49.81(72.24)	49.54(71.85)	48.73(70.67)	49.14(71.27)	48.42(70.24)
4.98(285.5)	49.10(71.22)	49.34(71.56)	48.92(70.95)	49.31(71.52)	48.11(69.78)
5.20(298.5)	49.46(71.74)	49.33(71.55)	48.98(71.04)	49.16(71.27)	48.89(70.91)
5.38(308.5)	0.001 0.00)	0.001 0.00)	49.41(71.66)	49.10(71.22)	49.28(70.02)
5.75(330.0)	48.74(70.69)	49.16(71.31)	49.12(71.25)	48.62(70.52)	47.44(68.82)
5.89(337.5)	48.80(70.79)	48.97(71.02)	48.63(70.53)	48.65(70.56)	47.57(69.00)
6.16(353.5)	49.14(71.27)	49.05(71.14)	48.59(70.48)	49.05(71.14)	0.001 0.00)

ANGLE RAD. (DEG.)	TT1 - I.D. DEG.C (DEG.F)	TT2 DEG.C (DEG.F)	TT3 DEG.C (DEG.F)	TT4 DEG.C (DEG.F)	TT5 - O.D. DEG.C (DEG.F)
0.39(22.5)	345.6(622.2)	337.7(608.0)	336.5(605.7)	339.8(611.6)	342.7(617.0)
0.89(51.5)	355.3(639.6)	348.1(626.6)	339.7(611.5)	340.8(613.5)	0.0(0.0)
1.28(73.5)	0.0(0.0)	303.5(546.3)	280.7(505.4)	293.9(529.1)	309.4(556.9)
1.96(112.5)	275.7(496.3)	259.0(466.2)	252.7(455.0)	258.6(461.9)	262.9(473.3)
2.85(163.5)	290.5(522.9)	271.6(488.9)	0.0(0.0)	0.0(0.0)	0.0(0.0)
3.53(202.5)	272.0(489.6)	257.1(462.8)	251.2(452.3)	254.4(458.0)	260.7(469.3)
4.04(231.5)	0.0(0.0)	266.8(480.3)	257.4(463.3)	262.2(472.0)	269.7(485.5)
4.59(263.0)	0.0(0.0)	330.6(595.1)	0.0(0.0)	331.1(596.1)	329.5(593.2)
5.10(292.5)	345.4(621.8)	338.0(608.5)	333.6(600.6)	335.9(604.6)	341.9(615.0)
5.99(343.5)	357.9(644.3)	348.6(627.6)	339.8(611.7)	0.0(0.0)	0.0(0.0)

ANGLE RAD. (DEG.)	PS(I.D.) N/CM**2 (PSIA)	PS(O.D.) N/CM**2 (PSIA)
1.04(60.0)	46.36(67.24)	0.001 0.00)
1.83(105.0)	45.87(66.54)	0.001 0.00)
2.46(141.5)	46.07(66.82)	46.01(66.74)
3.02(173.5)	46.33(67.20)	46.24(67.07)
3.75(215.0)	45.74(66.34)	0.001 0.00)
4.42(253.5)	46.75(67.81)	46.82(67.91)
4.82(276.5)	46.95(68.10)	46.93(68.07)
5.61(321.5)	46.48(67.42)	46.57(67.54)
6.10(350.0)	46.42(67.32)	0.001 0.00)

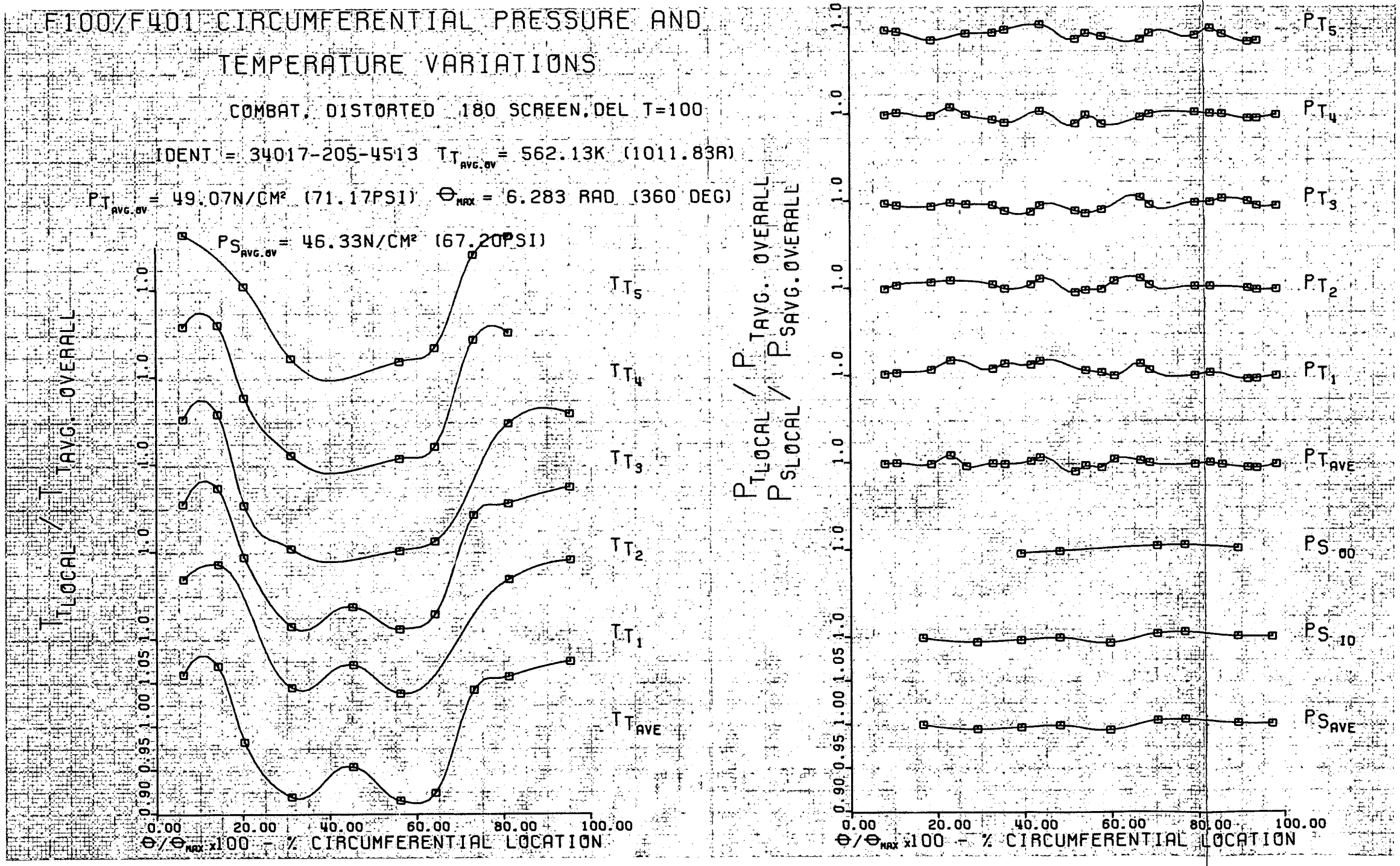


Figure 80.

DF 91999

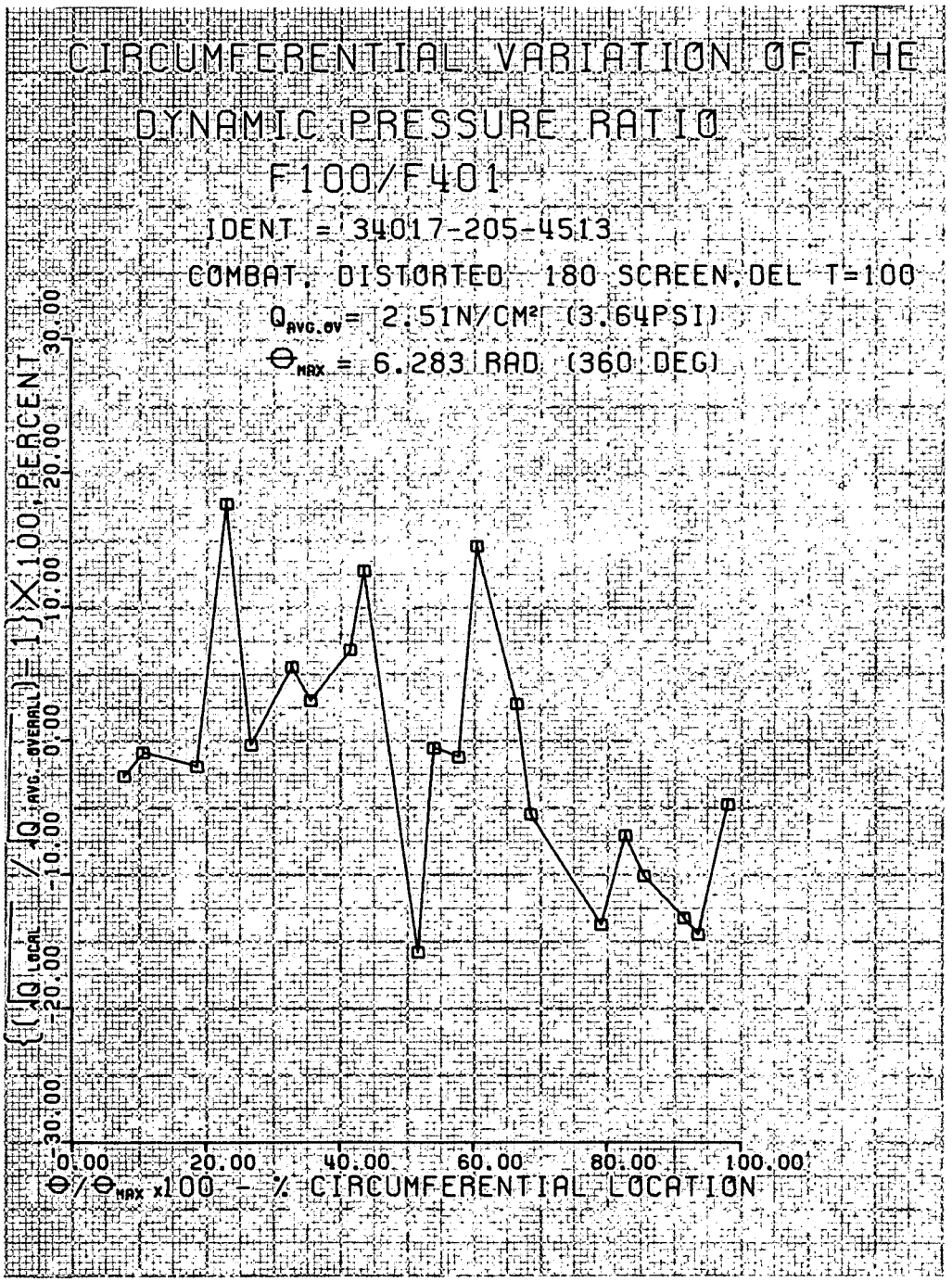
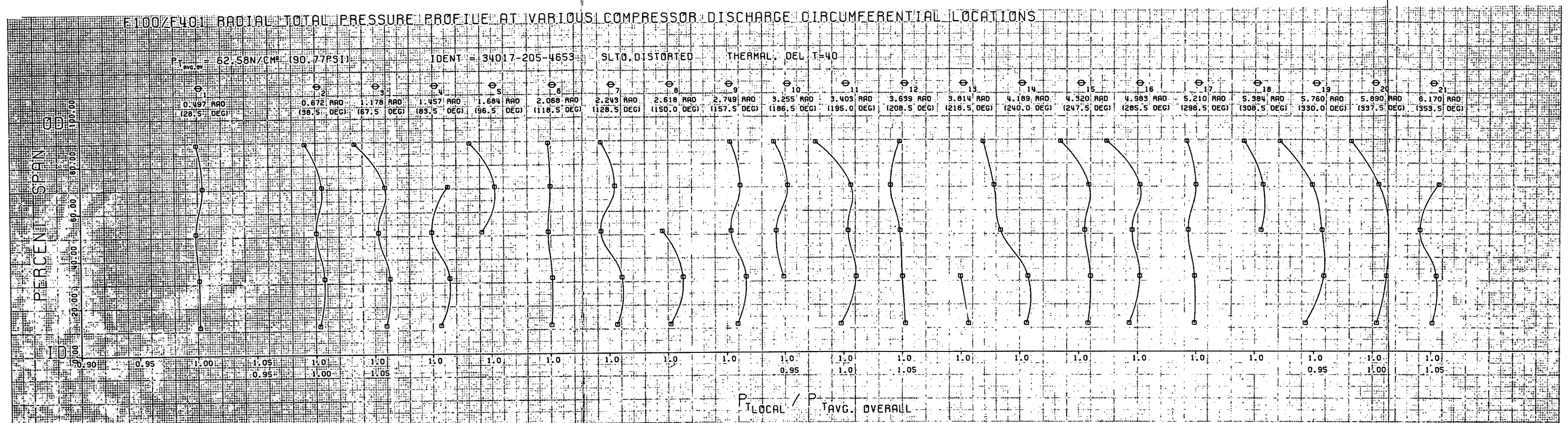
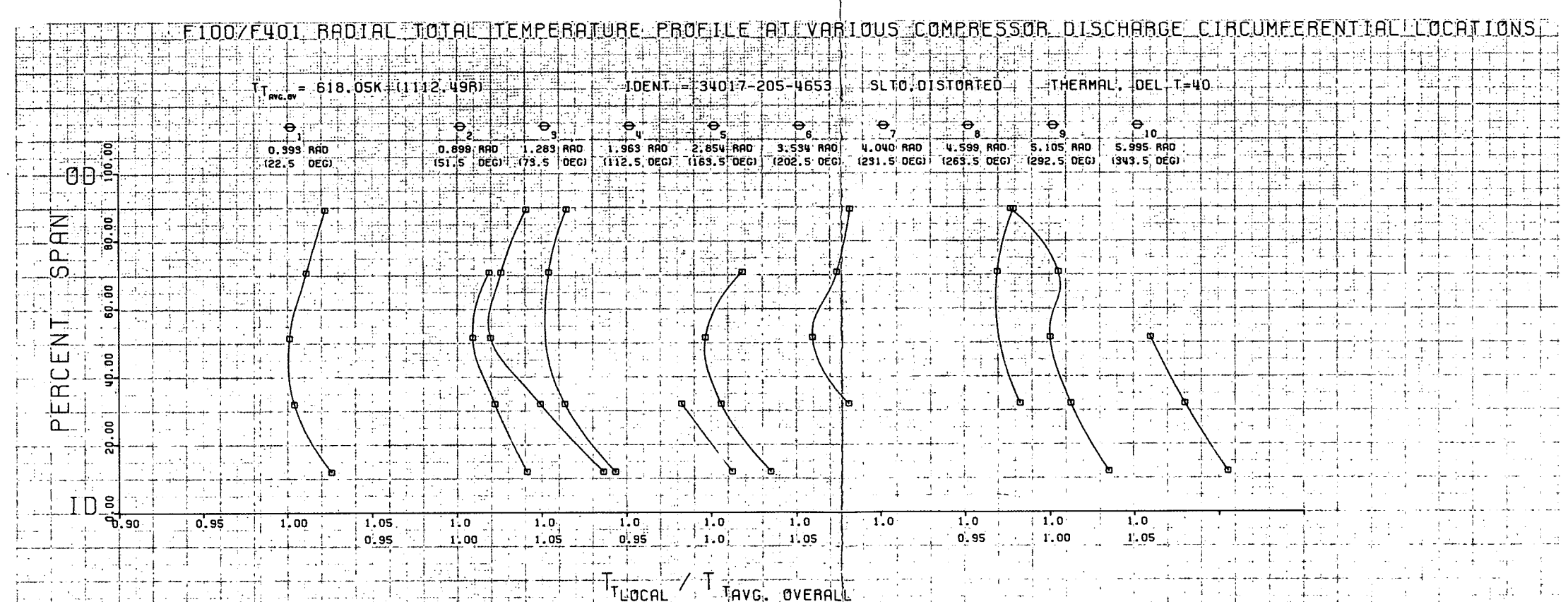


Figure 81.

DF 91968



DF 91934



DF 91935

INPUT DATA FOR RUN NO. 4653

ANGLE RAD. (DEG.)	PT1 - I.D. N/CM**2 (PSIA)	PT2 N/CM**2 (PSIA)	PT3 N/CM**2 (PSIA)	PT4 N/CM**2 (PSIA)	PT5 - O.D. N/CM**2 (PSIA)
0.491 28.5)	62.68(90.92)	62.66(90.88)	62.50(90.65)	62.86(91.18)	62.54(90.71)
0.671 38.5)	62.79(91.07)	63.05(91.44)	62.61(90.82)	62.92(91.26)	62.02(89.94)
1.171 67.5)	63.18(91.64)	63.41(91.97)	62.79(91.07)	63.14(91.58)	61.54(89.26)
1.451 83.5)	63.02(91.41)	63.48(92.08)	62.54(90.70)	63.40(91.99)	0.00(0.00)
1.881 96.5)	0.00(0.00)	0.00(0.00)	62.08(90.03)	62.78(91.05)	61.42(89.09)
2.061(118.5)	62.62(90.82)	62.67(90.89)	62.45(90.58)	62.58(90.77)	62.45(90.58)
2.241(128.5)	62.79(91.07)	63.25(91.75)	62.14(90.13)	62.89(91.22)	62.13(90.12)
2.611(150.0)	62.71(90.95)	63.38(91.92)	62.29(90.34)	0.00(0.00)	0.00(0.00)
2.74(157.5)	63.14(91.58)	63.60(92.25)	62.79(91.08)	63.30(91.81)	62.75(91.01)
3.25(186.5)	0.00(0.00)	62.51(90.67)	62.10(90.08)	62.73(90.99)	61.97(89.88)
3.401(195.0)	62.45(90.57)	63.25(91.74)	62.82(91.11)	62.98(91.36)	61.09(88.61)
3.631(208.5)	62.74(91.00)	62.58(90.77)	62.45(90.58)	61.94(89.85)	62.44(90.57)
3.81(218.5)	62.98(91.34)	62.55(90.72)	0.00(0.00)	0.00(0.00)	0.00(0.00)
4.18(240.0)	62.91(91.28)	63.01(91.39)	61.55(89.29)	61.21(88.78)	60.63(87.93)
4.31(247.5)	63.05(91.45)	63.19(91.65)	62.89(91.21)	63.11(91.54)	61.16(89.30)
4.98(285.5)	62.13(90.11)	62.70(90.93)	62.28(90.33)	62.70(90.95)	60.94(88.38)
5.201(298.5)	62.49(90.64)	62.50(90.66)	62.15(90.14)	62.57(90.75)	62.07(90.02)
5.381(308.5)	0.00(0.00)	0.00(0.00)	62.92(91.25)	63.02(91.41)	62.01(89.94)
5.75(330.0)	62.14(90.13)	63.11(91.53)	63.02(91.40)	62.49(90.64)	60.79(88.17)
5.89(337.5)	62.79(91.07)	63.32(91.84)	0.00(0.00)	62.90(91.23)	61.42(89.08)
6.16(353.5)	62.65(90.86)	62.87(91.18)	61.99(89.92)	63.01(91.39)	0.00(0.00)

ANGLE RAD. (DEG.)	TT1 - I.D. DEG.C (DEG.F)	TT2 DEG.C (DEG.F)	TT3 DEG.C (DEG.F)	TT4 DEG.C (DEG.F)	TT5 - O.D. DEG.C (DEG.F)
0.391 22.5)	378.8(681.8)	365.3(657.6)	363.5(654.4)	369.8(665.7)	376.7(678.1)
0.891 51.5)	388.2(698.8)	376.5(677.7)	368.4(663.1)	374.9(674.1)	0.0(0.0)
1.281 73.5)	385.1(693.2)	362.0(651.7)	344.0(619.2)	347.9(626.3)	357.2(643.0)
1.96(112.5)	358.5(645.4)	340.2(612.3)	0.0(0.0)	334.3(601.9)	341.0(613.8)
2.85(163.5)	370.3(666.5)	351.9(633.4)	0.0(0.0)	0.0(0.0)	0.0(0.0)
3.53(202.5)	337.4(607.3)	335.4(603.7)	329.7(593.5)	343.1(617.7)	0.0(0.0)
4.04(231.5)	0.0(0.0)	351.0(631.8)	337.5(607.6)	346.6(624.0)	351.3(632.7)
4.59(263.5)	0.0(0.0)	382.7(688.9)	0.0(0.0)	374.3(674.2)	380.3(684.5)
5.10(292.5)	384.1(691.5)	370.3(666.6)	362.8(653.0)	369.8(658.5)	348.3(627.3)
5.99(343.5)	398.7(714.1)	381.1(686.0)	368.5(663.4)	0.0(0.0)	0.0(0.0)

ANGLE RAD. (DEG.)	PS(I.D.) N/CM**2 (PSIA)	PS(O.D.) N/CM**2 (PSIA)
1.04(60.0)	59.16(85.81)	0.00(0.00)
1.83(105.0)	59.23(85.91)	0.00(0.00)
2.46(141.5)	59.17(85.83)	59.15(85.79)
3.02(173.5)	59.58(86.42)	59.53(86.35)
3.75(215.0)	59.29(85.99)	0.00(0.00)
4.42(253.5)	59.48(86.27)	59.65(86.52)
4.82(276.5)	59.54(86.36)	59.50(86.29)
5.63(322.5)	59.32(86.04)	59.51(86.37)
6.10(350.0)	59.36(86.09)	0.00(0.00)

Figure 82.

FOLDOUT FRAME 1

FOLDOUT FRAME 2

FOLDOUT FRAME 3

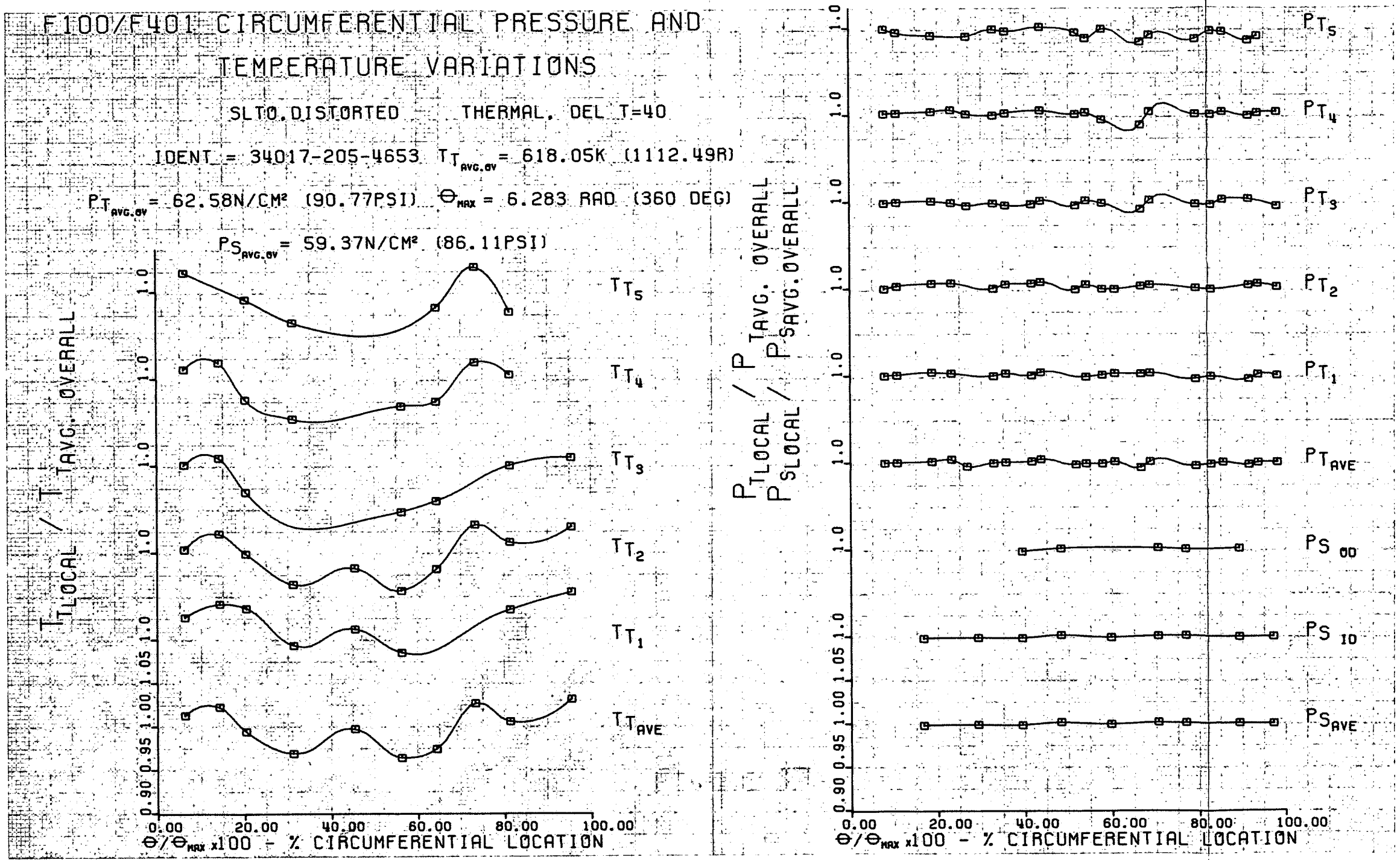


Figure 83.

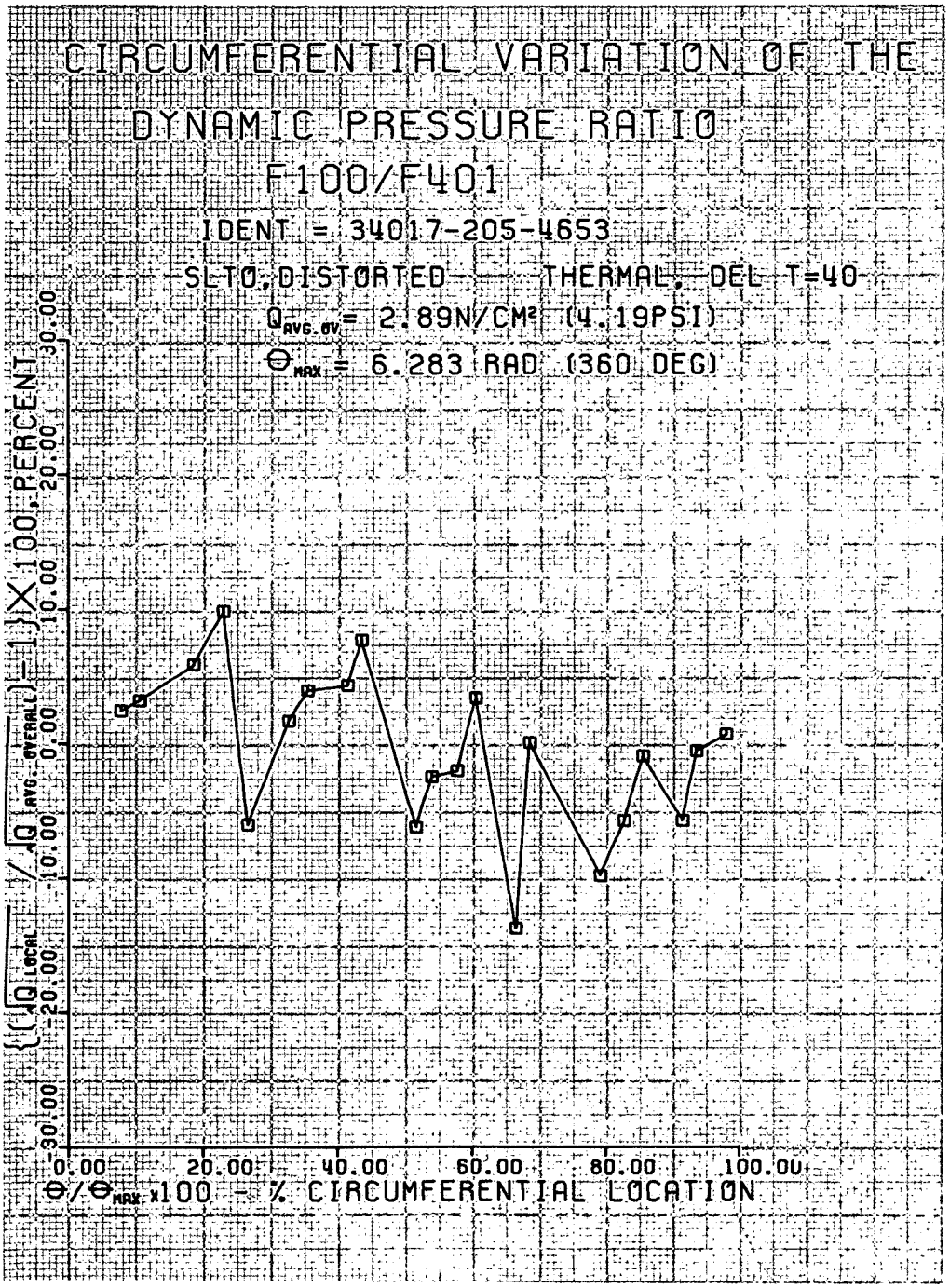
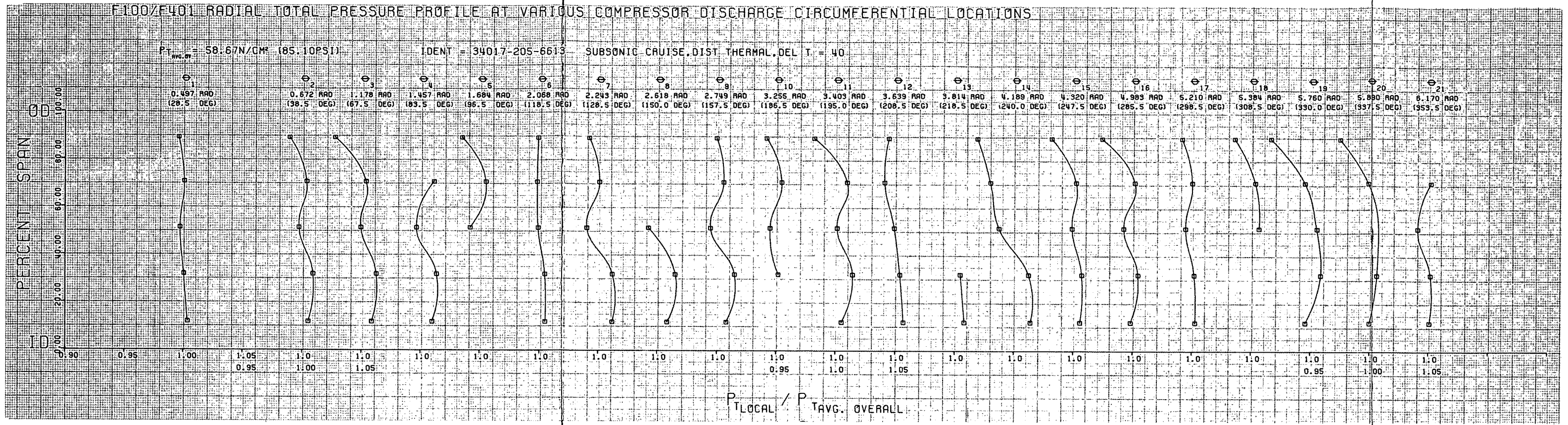


Figure 84.

DF 91969



DF 91936

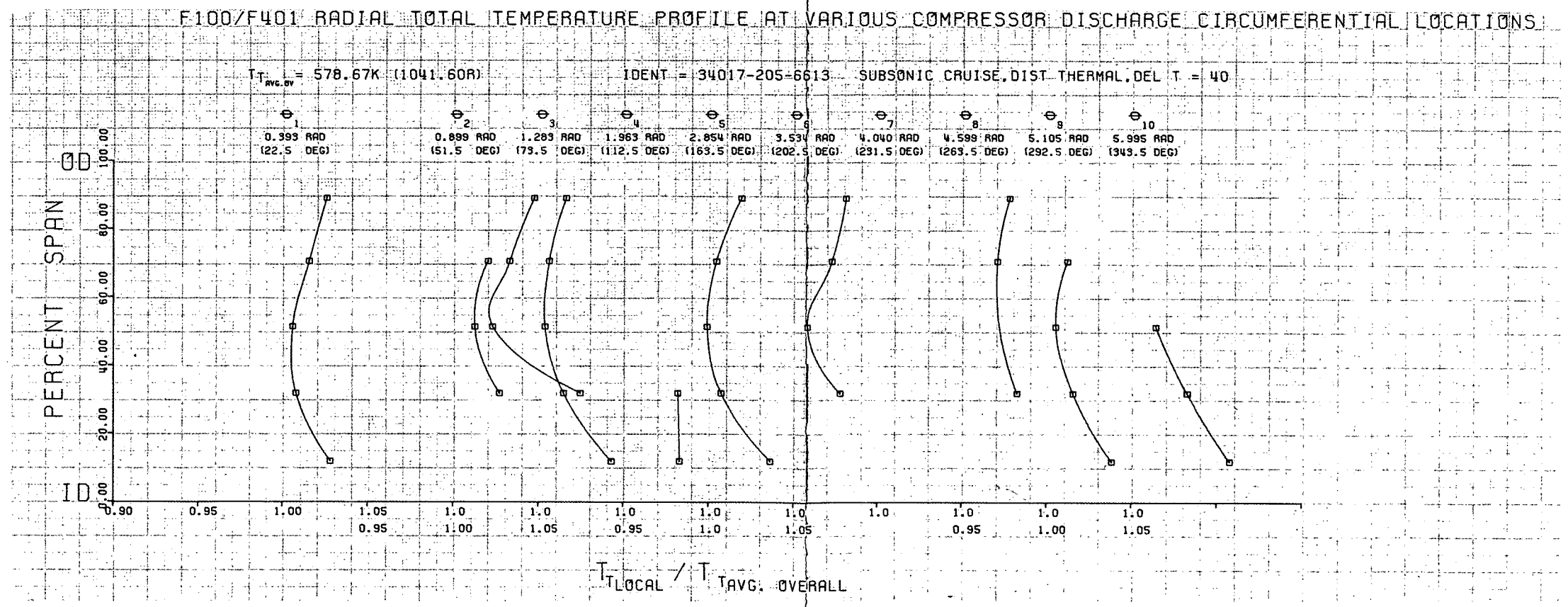


Figure 85.

DF 91937

INPUT DATA FOR RUN NO. 6613

ANGLE RAD. (DEG.)	PT1 - I.D. N/CM**2 (PSIA)	PT2 N/CM**2 (PSIA)	PT3 N/CM**2 (PSIA)	PT4 N/CM**2 (PSIA)	PT5 - O.D. N/CM**2 (PSIA)
0.49(28.5)	58.89(85.42)	58.70(85.14)	58.52(84.87)	58.73(85.19)	58.45(84.78)
0.67(38.5)	58.97(85.52)	59.20(85.86)	58.50(84.85)	58.89(85.42)	59.05(84.20)
1.17(67.5)	59.16(85.80)	59.38(86.13)	58.61(85.01)	58.87(85.39)	57.36(83.19)
1.45(83.5)	59.23(85.92)	59.46(86.26)	58.46(84.78)	59.34(86.07)	0.00(0.00)
1.68(96.5)	0.00(0.00)	0.00(0.00)	58.20(84.42)	58.98(85.54)	57.80(83.84)
2.06(118.5)	58.95(85.50)	58.94(85.48)	58.60(85.00)	58.96(84.93)	58.61(85.01)
2.24(128.5)	59.36(86.10)	59.38(86.13)	58.11(84.28)	59.75(85.21)	58.24(84.47)
2.61(150.0)	59.15(85.79)	59.56(86.38)	58.24(84.47)	0.00(0.00)	0.00(0.00)
2.74(157.5)	59.14(85.77)	59.55(86.38)	58.36(84.64)	59.02(85.60)	58.67(85.09)
3.25(186.5)	0.00(0.00)	58.78(85.26)	58.37(84.66)	58.97(85.53)	58.20(84.42)
3.40(195.0)	58.98(85.55)	59.53(86.34)	58.76(85.23)	59.26(85.95)	57.64(83.60)
3.63(208.5)	59.09(85.70)	58.91(85.45)	58.64(85.05)	58.16(84.36)	58.37(84.66)
3.81(218.5)	59.15(85.79)	58.95(85.51)	0.00(0.00)	0.00(0.00)	0.00(0.00)
4.18(240.0)	59.30(86.30)	59.41(86.17)	57.95(84.05)	57.93(83.44)	56.88(82.50)
4.31(247.5)	59.01(85.59)	59.10(85.72)	58.62(85.02)	58.82(85.32)	57.61(83.56)
4.98(285.5)	58.57(84.95)	58.94(85.49)	58.23(84.45)	58.78(85.26)	57.16(82.91)
5.20(298.5)	58.83(85.33)	58.79(85.27)	58.36(84.65)	58.71(85.15)	58.20(84.41)
5.38(308.5)	0.00(0.00)	0.00(0.00)	59.07(85.68)	58.89(85.41)	57.88(83.95)
5.75(330.0)	58.43(84.74)	59.18(85.83)	58.99(85.56)	58.41(84.72)	56.74(82.30)
5.89(337.5)	58.68(85.11)	59.07(85.68)	0.00(0.00)	58.63(85.04)	57.21(82.98)
6.16(353.5)	58.73(85.19)	58.78(85.26)	58.16(84.35)	58.81(85.31)	0.00(0.00)

ANGLE RAD. (DEG.)	TT1 - I.D. DEG.C (DEG.F)	TT2 DEG.C (DEG.F)	TT3 DEG.C (DEG.F)	TT4 DEG.C (DEG.F)	TT5 - O.D. DEG.C (DEG.F)
0.39(22.5)	339.6(611.3)	327.9(590.2)	326.7(588.2)	332.3(598.2)	338.4(609.1)
0.89(51.5)	0.0(0.0)	339.1(610.4)	335.1(603.3)	0.0(0.0)	0.0(0.0)
1.28(73.5)	0.0(0.0)	337.6(607.7)	307.8(554.1)	313.6(564.5)	322.0(579.6)
1.96(112.5)	329.3(576.8)	303.0(545.4)	298.6(539.0)	298.1(536.6)	303.9(547.1)
2.85(163.5)	313.8(564.8)	313.2(563.7)	0.0(0.0)	0.0(0.0)	0.0(0.0)
3.53(202.5)	315.4(567.8)	298.7(537.7)	294.0(529.2)	297.2(535.0)	305.4(550.4)
4.04(231.5)	0.0(0.0)	310.6(559.1)	299.3(538.8)	307.0(552.1)	312.6(562.8)
4.59(263.5)	0.0(0.0)	342.3(616.1)	0.0(0.0)	335.6(604.1)	339.7(611.6)
5.10(292.5)	348.7(629.7)	332.5(598.6)	326.6(587.9)	330.6(595.2)	0.0(0.0)
5.99(343.5)	356.8(642.2)	342.4(616.4)	331.9(597.4)	0.0(0.0)	0.0(0.0)

ANGLE RAD. (DEG.)	PS(I.D.) N/CM**2 (PSIA)	PS(O.D.) N/CM**2 (PSIA)
1.04(60.0)	55.26(80.15)	0.00(0.00)
1.83(105.0)	55.27(80.16)	0.00(0.00)
2.46(141.5)	55.25(80.14)	55.22(80.09)
3.02(173.5)	55.62(80.67)	55.58(80.61)
3.75(215.0)	55.30(80.21)	0.00(0.00)
4.42(253.5)	55.93(80.55)	55.57(80.60)
4.82(276.5)	55.60(80.65)	55.56(80.58)
5.61(321.5)	55.39(80.34)	55.53(80.55)
6.10(350.0)	55.40(80.35)	0.00(0.00)

FOLDOUT FRAME 1

FOLDOUT FRAME 2

FOLDOUT FRAME 3

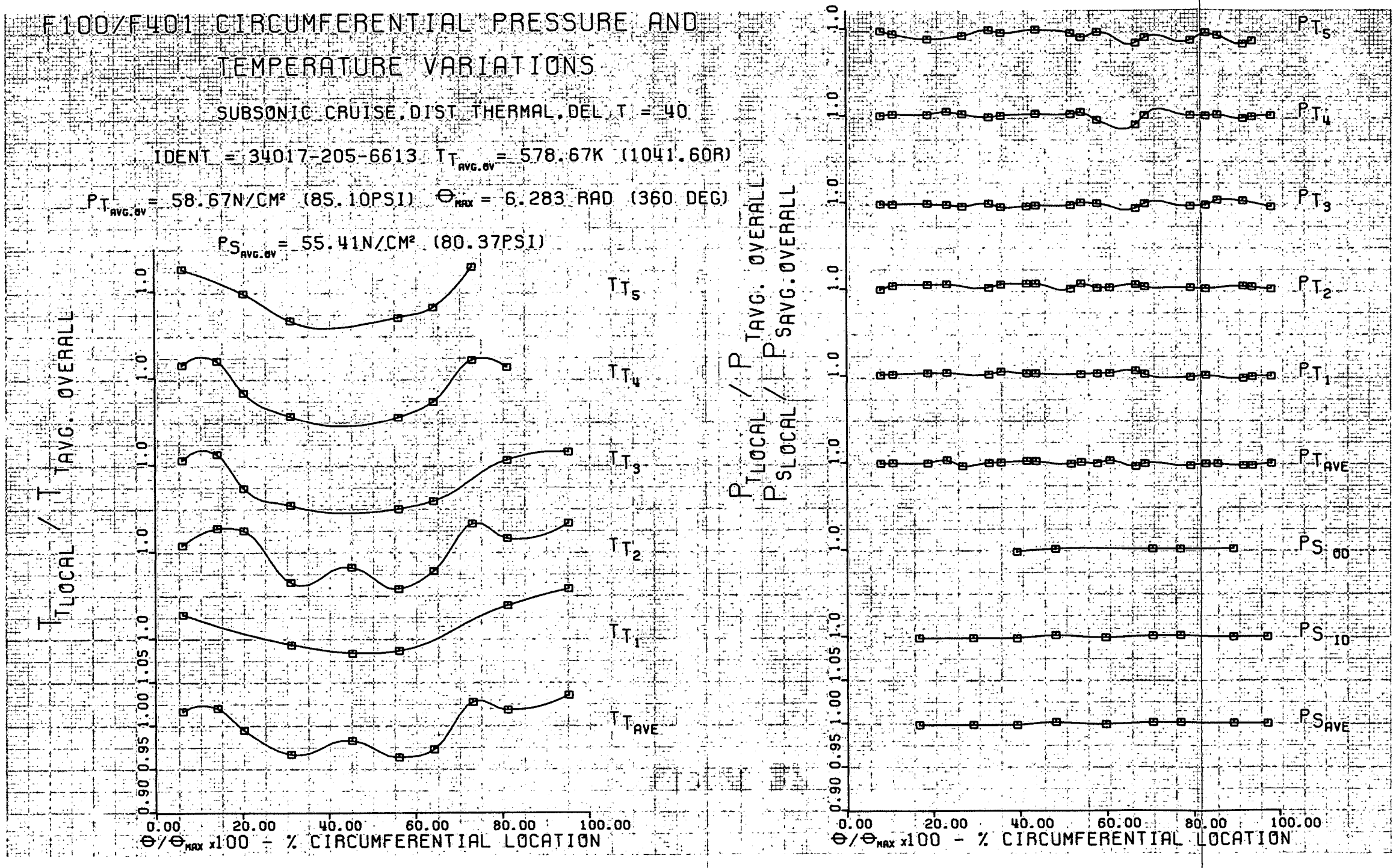

F100/F401 CIRCUMFERENTIAL PRESSURE AND TEMPERATURE VARIATIONS
SUBSONIC CRUISE, DIST THERMAL, DEL T = 40
IDENT = 34017-205-6613 $T_{T_{AVG.OV}}$ = 578.67K (1041.60R)
$P_{T_{AVG.OV}}$ = 58.67N/CM² (85.10PSI) Θ_{MAX} = 6.283 RAD (360 DEG)
$PS_{AVG.OV}$ = 55.41N/CM² (80.37PSI)
T_{TLOCAL} / $T_{TAVG.OVERALL}$
P_{TLOCAL} / $P_{TAVG.OVERALL}$
P_{SLOCAL} / $P_{SAVG.OVERALL}$
TT_5
TT_4
TT_3
TT_2
TT_1
TT_{AVE}
PT_5
PT_4
PT_3
PT_2
PT_1
PT_{AVE}
PS_{00}
PS_{10}
PS_{AVE}
0.90 0.95 1.00 1.05 1.0
0.00 20.00 40.00 60.00 80.00 100.00
Θ/Θ_{MAX} x100 - % CIRCUMFERENTIAL LOCATION

Figure 86.

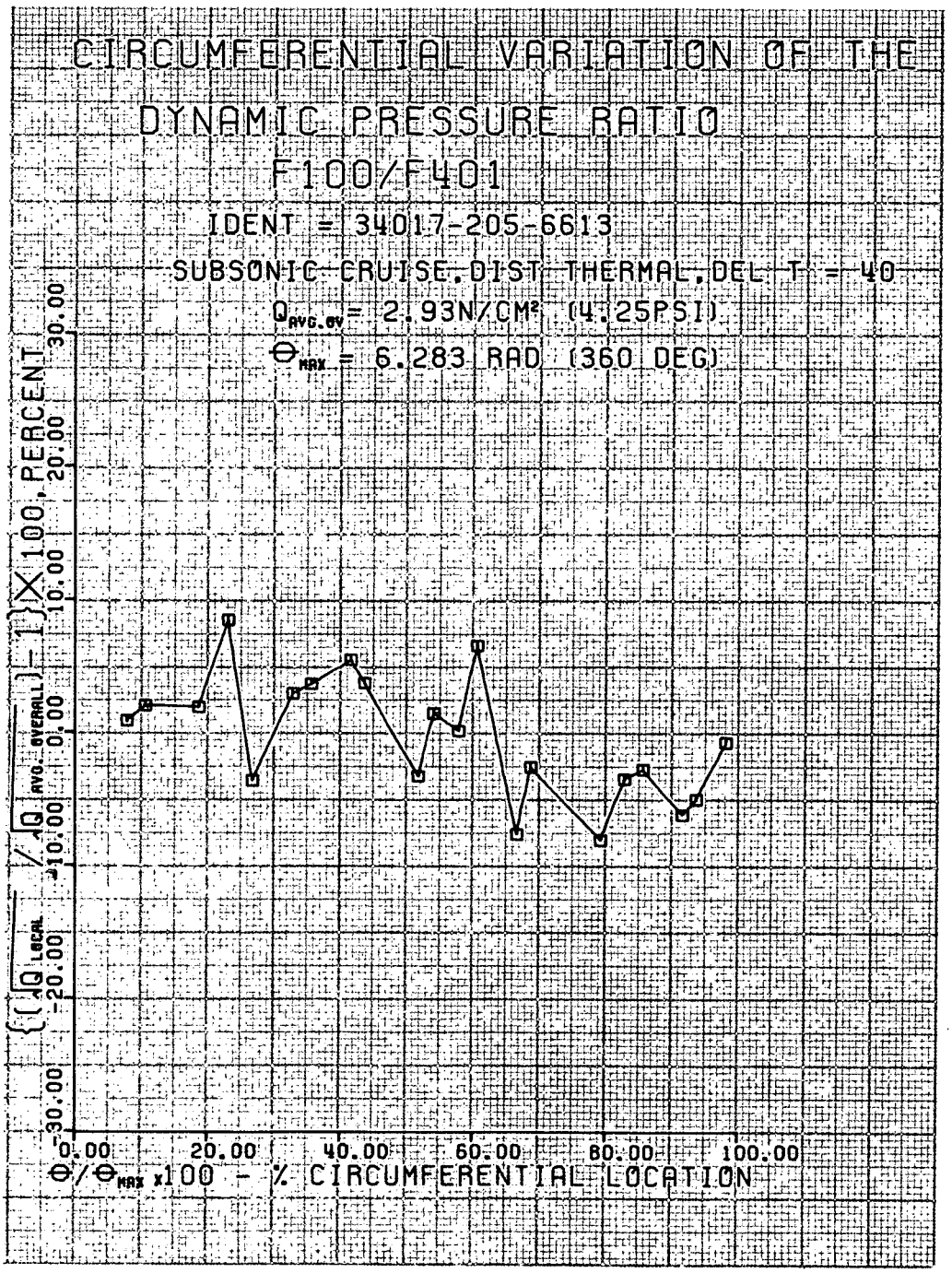
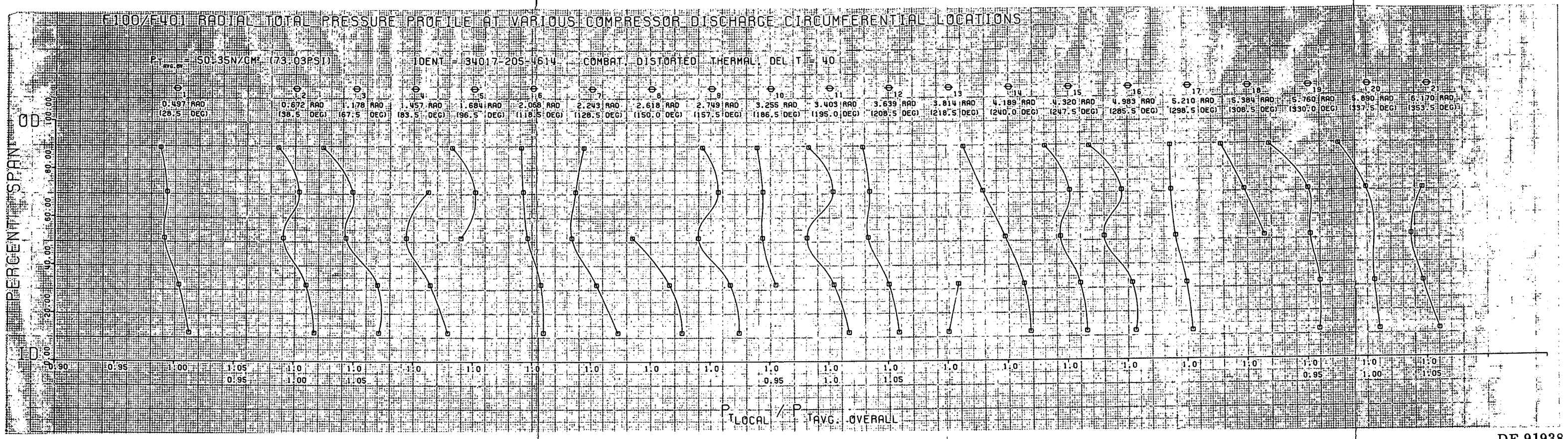
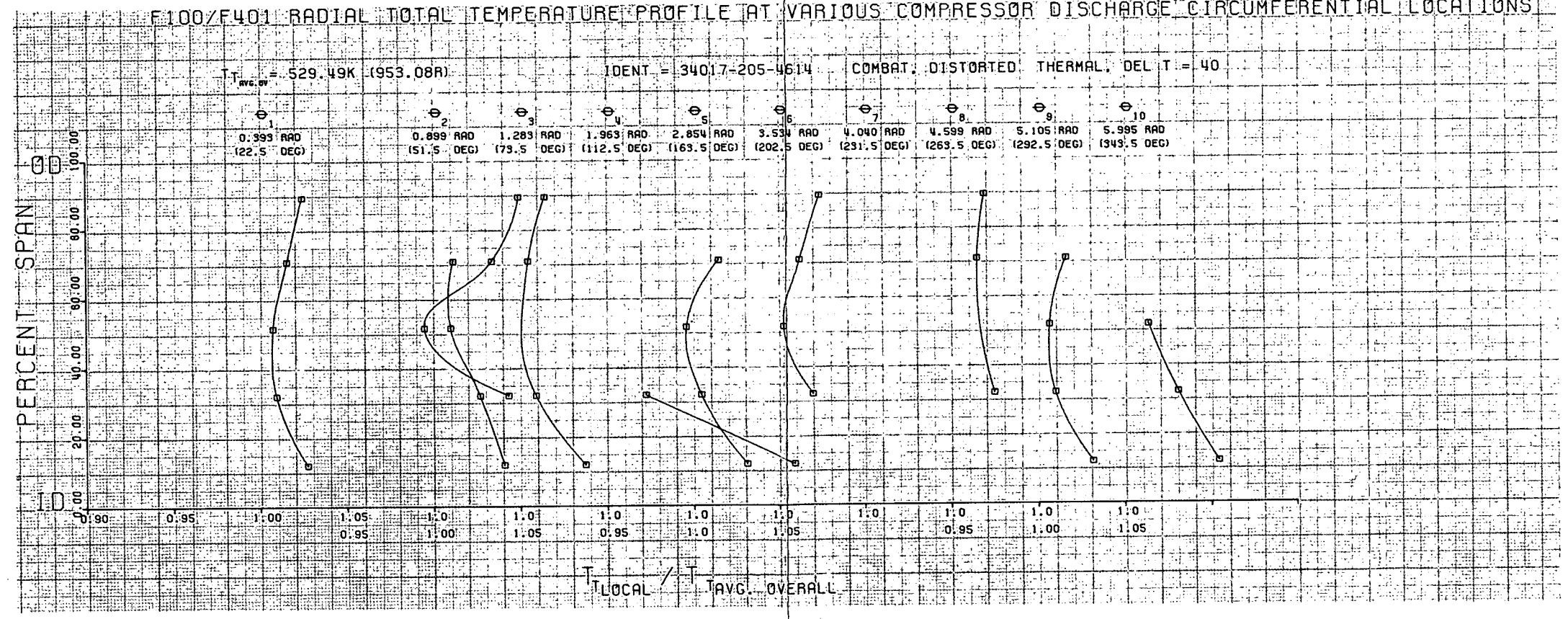


Figure 87.

DF 91970



DF 91938



DF 91939

Figure 88.

INPUT DATA FOR RUN NO. 4614

ANGLE RAD. (DEG.)	PT1 - I.D. N/CM**2 (PSIA)	PT2 N/CM**2 (PSIA)	PT3 N/CM**2 (PSIA)	PT4 N/CM**2 (PSIA)	PT5 - O.D. N/CM**2 (PSIA)
0.49(28.5)	50.99(73.96)	50.96(73.94)	49.85(72.45)	50.06(72.61)	49.77(72.19)
0.87(38.5)	51.23(74.31)	50.89(73.81)	49.92(72.41)	50.59(73.38)	49.71(72.10)
1.17(67.5)	51.44(74.60)	51.37(74.51)	50.03(72.57)	50.32(72.99)	49.08(71.18)
1.45(83.5)	51.86(75.21)	51.10(74.12)	50.08(72.64)	51.03(74.03)	0.00(0.00)
1.68(96.5)	0.00(0.00)	0.00(0.00)	49.89(72.36)	50.50(73.24)	49.53(71.84)
2.06(118.5)	50.87(73.78)	50.77(73.64)	50.20(72.81)	50.01(72.54)	49.93(72.42)
2.24(128.5)	51.52(74.73)	50.63(73.44)	49.58(71.91)	49.74(72.15)	50.11(72.68)
2.61(150.0)	51.70(74.99)	51.17(74.22)	49.63(71.99)	0.00(0.00)	0.00(0.00)
2.74(157.5)	51.59(74.83)	51.22(74.28)	49.87(72.33)	50.72(73.56)	50.05(72.60)
3.25(186.5)	0.00(0.00)	50.64(73.45)	50.09(72.65)	49.85(72.31)	0.00(0.00)
3.40(195.0)	51.22(74.29)	50.58(73.36)	49.65(71.72)	50.57(73.35)	49.54(71.86)
3.63(208.5)	50.82(73.71)	50.40(73.10)	49.53(71.84)	49.60(71.95)	49.32(71.54)
3.81(218.5)	50.39(73.09)	50.81(73.70)	0.00(0.00)	0.00(0.00)	0.00(0.00)
4.18(240.0)	51.32(74.44)	51.05(74.05)	50.27(72.91)	49.34(71.57)	48.53(70.38)
4.31(247.5)	51.18(74.23)	50.90(73.83)	50.08(72.63)	50.48(73.21)	49.44(71.71)
4.98(285.5)	50.71(73.55)	50.57(73.35)	49.40(71.65)	50.15(72.74)	48.79(70.77)
5.21(298.5)	50.59(73.38)	50.36(73.04)	49.89(72.36)	49.70(72.09)	49.68(72.05)
5.38(308.5)	0.00(0.00)	0.00(0.00)	53.11(74.44)	50.28(72.92)	49.32(71.54)
5.75(330.0)	50.86(73.77)	50.89(73.81)	50.69(73.24)	50.42(73.13)	48.61(70.80)
5.89(337.5)	50.91(73.84)	50.71(73.55)	0.00(0.00)	50.36(73.05)	49.18(71.34)
6.16(353.5)	50.91(73.84)	50.23(72.85)	49.74(72.14)	50.23(72.86)	0.00(0.00)

ANGLE RAD. (DEG.)	TT1 - I.D. DEG.C (DEG.F)	TT2 DEG.C (DEG.F)	TT3 DEG.C (DEG.F)	TT4 DEG.C (DEG.F)	TT5 - O.D. DEG.C (DEG.F)
0.39(22.5)	288.68(519.5)	279.22(502.6)	278.22(500.7)	282.56(508.5)	287.22(517.0)
0.89(51.5)	295.81(532.4)	288.51(519.3)	279.61(503.3)	280.44(504.7)	0.00(0.0)
1.28(73.5)	0.00(0.0)	270.71(487.2)	269.00(484.2)	269.00(484.2)	273.81(493.0)
1.96(112.5)	267.61(483.6)	252.56(454.6)	0.00(0.0)	250.22(450.4)	255.44(459.8)
2.85(163.5)	305.56(549.9)	259.78(467.6)	0.00(0.0)	0.00(0.0)	0.00(0.0)
3.53(202.5)	264.11(475.4)	250.11(450.1)	265.56(460.2)	253.61(460.2)	0.00(0.0)
4.04(231.5)	0.00(0.0)	258.31(465.1)	269.22(448.5)	254.31(457.8)	260.61(469.0)
4.59(263.5)	0.00(0.0)	287.44(517.6)	0.00(0.0)	282.22(508.1)	284.56(512.2)
5.10(292.5)	290.91(523.6)	279.56(503.2)	277.78(499.9)	282.91(509.3)	0.00(0.0)
5.99(343.5)	303.06(545.4)	290.61(523.1)	281.61(506.9)	0.00(0.0)	0.00(0.0)

ANGLE RAD. (DEG.)	PS(I.D.) N/CM**2 (PSIA)	PS(O.D.) N/CM**2 (PSIA)
1.04(60.0)	47.16(68.40)	0.00(0.00)
1.83(105.0)	47.06(68.26)	0.00(0.00)
2.46(141.5)	47.38(68.72)	47.31(68.62)
3.02(173.5)	47.59(69.03)	47.56(68.99)
3.75(215.0)	46.97(68.13)	0.00(0.00)
4.42(253.5)	47.29(68.53)	47.40(68.75)
4.82(276.5)	47.37(68.71)	47.28(68.58)
5.61(321.5)	47.35(68.68)	47.44(68.81)
6.10(350.0)	47.18(68.43)	0.00(0.00)

FOLDOUT FRAME 1

FOLDOUT FRAME 2

FOLDOUT FRAME 3

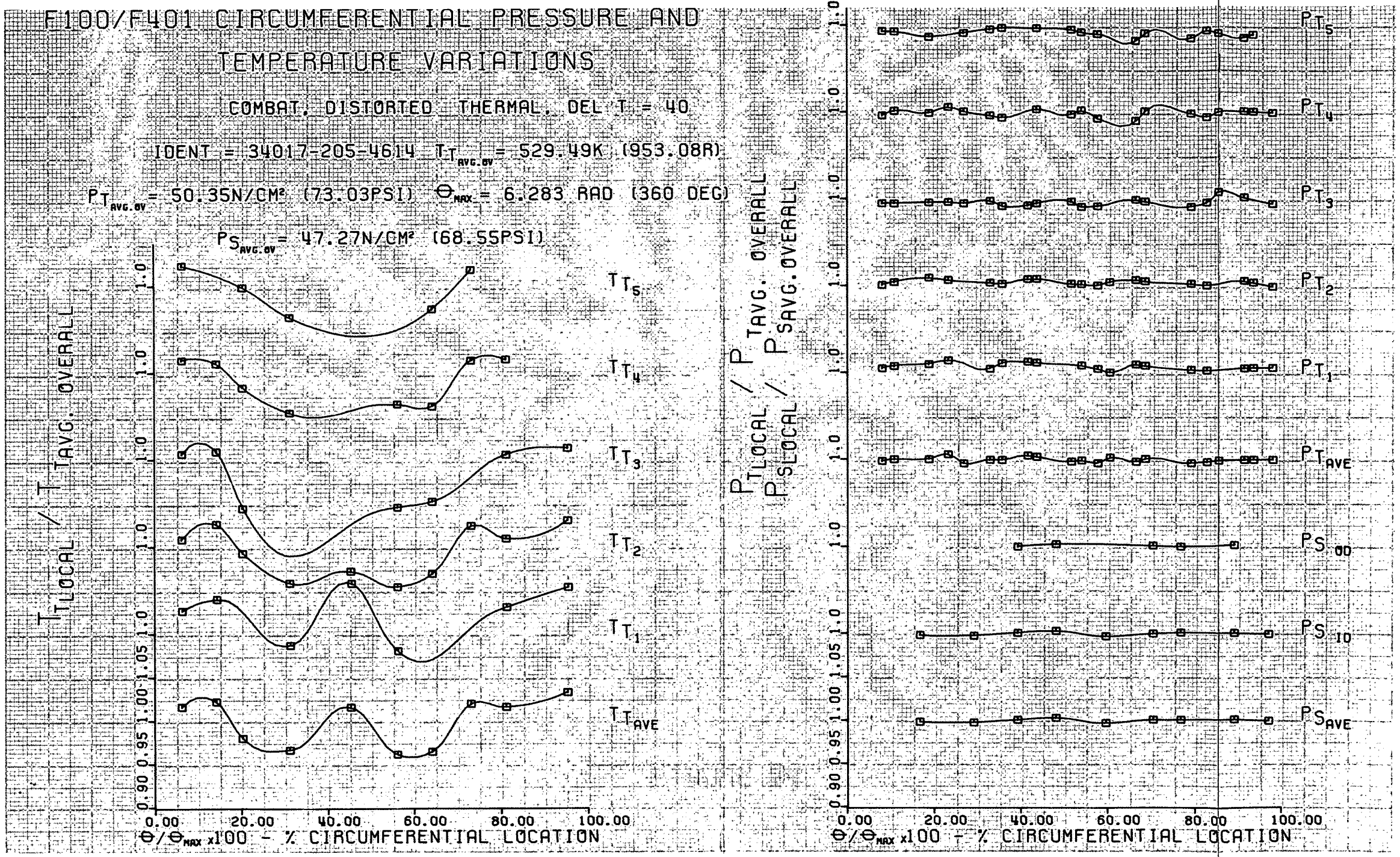


Figure 89.

DF 92002

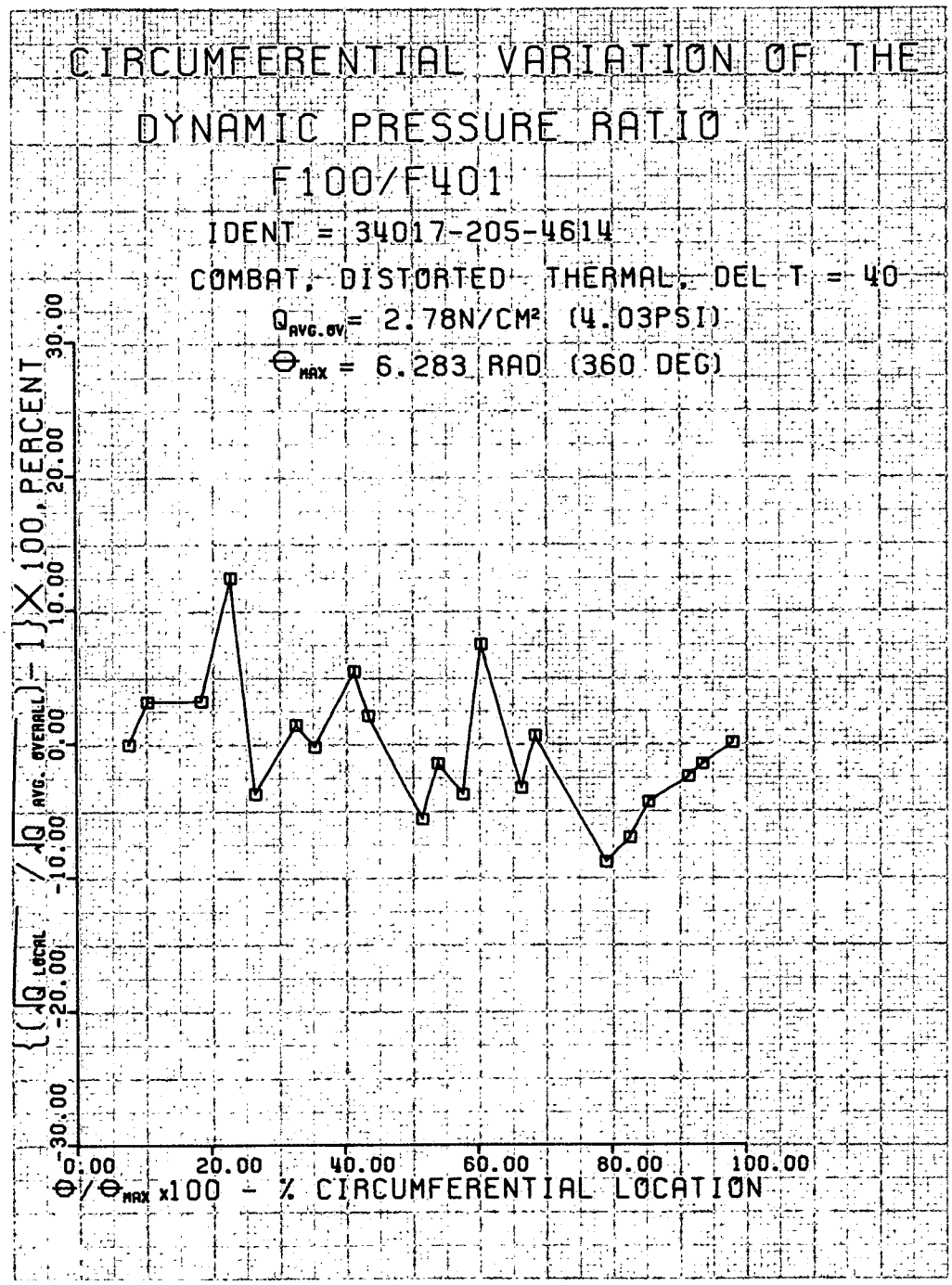
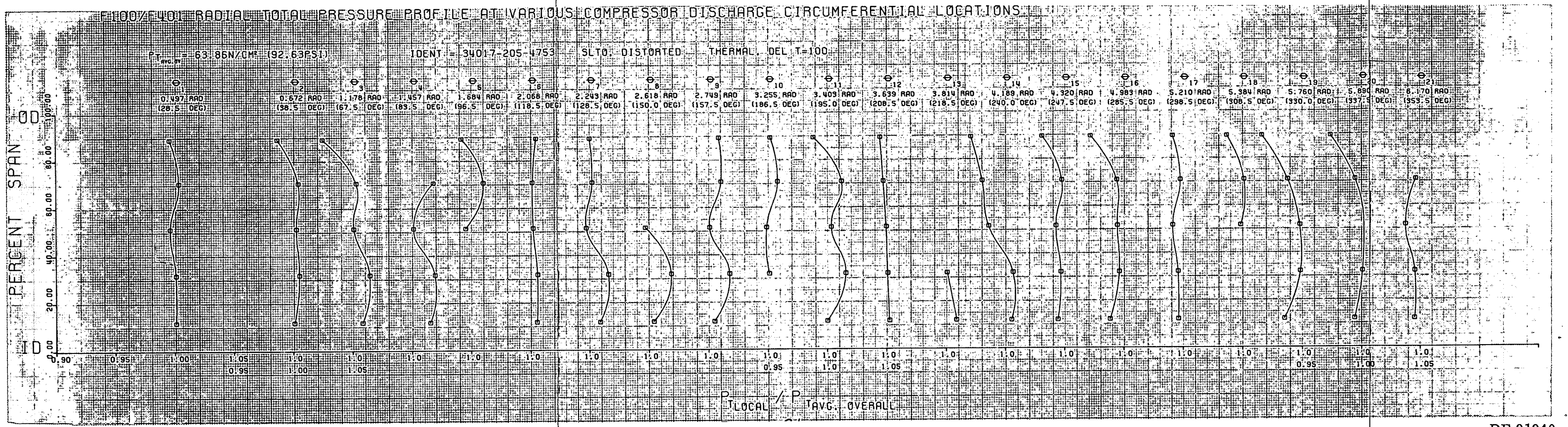
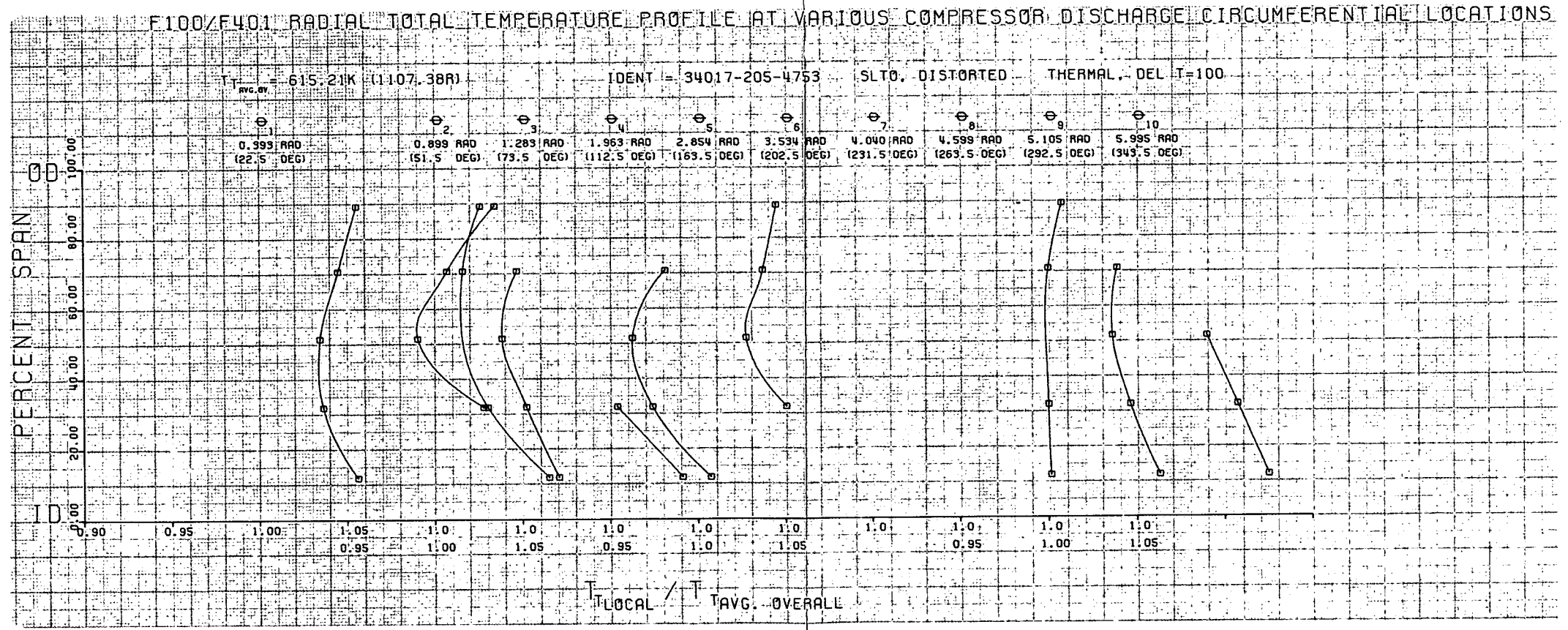


Figure 90.

DF 91971



DF 91940



DF 91941

INPUT DATA FOR RUN NO. 4753

ANGLE RAD. (DEG.)	PT1 - I.D. N/CM**2 (PSIA)	PT2 N/CM**2 (PSIA)	PT3 N/CM**2 (PSIA)	PT4 N/CM**2 (PSIA)	PT5 - O.D. N/CM**2 (PSIA)
0.491 28.5)	63.931(92.73)	63.94(92.76)	63.62(92.28)	64.11(92.98)	63.59(92.23)
0.671 38.5)	63.94(92.73)	64.21(93.13)	64.04(92.89)	64.14(93.04)	63.01(91.39)
1.171 67.5)	64.40(93.40)	64.80(93.98)	63.93(92.73)	64.06(92.92)	62.25(90.29)
1.451 83.5)	64.86(94.07)	65.11(94.44)	63.95(92.75)	63.03(94.32)	0.001 0.00)
1.681 96.5)	0.001 0.00)	0.001 0.00)	64.58(92.21)	64.52(93.59)	63.34(91.88)
2.061(118.5)	64.21(93.13)	64.25(93.19)	64.01(92.84)	63.96(92.76)	64.16(93.06)
2.241(128.5)	64.45(93.48)	64.91(94.15)	63.71(92.40)	64.03(92.87)	63.89(92.67)
2.611(150.0)	64.14(93.03)	65.07(94.38)	63.70(92.39)	0.001 0.00)	0.001 0.00)
2.741(157.5)	64.19(93.10)	65.00(94.28)	63.92(92.71)	64.54(93.61)	64.42(93.44)
3.251(186.5)	0.001 0.00)	63.94(92.76)	63.80(92.53)	64.40(93.41)	64.00(92.82)
3.401(195.0)	63.88(92.66)	64.88(94.10)	64.10(92.98)	64.66(93.78)	63.14(91.57)
3.631(208.5)	64.09(92.88)	63.94(92.76)	63.86(92.63)	63.71(92.40)	63.53(92.15)
3.811(218.5)	64.43(93.45)	63.94(92.76)	0.001 0.00)	0.001 0.00)	0.001 0.00)
4.181(240.0)	64.23(93.16)	64.30(93.26)	62.99(91.36)	64.64(93.86)	62.03(89.97)
4.311(247.5)	63.53(92.14)	63.69(92.38)	63.62(91.99)	63.75(92.46)	62.67(90.90)
4.98(285.5)	63.15(91.59)	63.64(92.31)	63.54(92.16)	63.51(92.11)	62.08(90.04)
5.201(298.5)	63.63(92.29)	63.62(92.27)	63.32(91.84)	63.75(92.46)	63.31(91.83)
5.381(308.5)	0.001 0.00)	0.001 0.00)	63.80(92.54)	63.98(92.80)	63.05(91.45)
5.751(330.0)	62.95(91.31)	63.79(92.52)	63.76(92.48)	63.12(91.56)	61.74(89.59)
5.891(337.5)	63.50(92.10)	63.94(92.73)	0.001 0.00)	63.53(92.14)	62.18(90.19)
6.161(353.5)	63.58(92.22)	63.60(92.25)	63.11(91.53)	63.67(92.35)	0.001 0.00)

ANGLE RAD. (DEG.)	TT1 - I.D. DEG.C (DEG.F)	TT2 DEG.C (DEG.F)	TT3 DEG.C (DEG.F)	TT4 DEG.C (DEG.F)	TT5 - O.D. DEG.C (DEG.F)
0.391 22.5)	394.41 709.9)	382.3(688.1)	381.2(686.1)	387.5(697.6)	394.0(709.2)
0.891 51.5)	403.5(726.3)	392.2(705.9)	383.6(690.6)	388.8(700.0)	0.0(0.0)
1.281 73.5)	0.0(0.0)	346.5(625.7)	323.3(581.9)	333.6(600.6)	350.4(630.8)
1.961(112.5)	338.5(609.4)	317.1(570.9)	0.0(0.0)	308.3(555.0)	314.6(566.3)
2.851(163.5)	354.6(638.4)	331.8(597.2)	0.0(0.0)	0.0(0.0)	0.0(0.0)
3.531(202.5)	333.5(600.4)	313.3(564.0)	306.3(583.3)	317.8(572.2)	0.0(0.0)
4.041(231.5)	0.0(0.0)	329.5(593.2)	315.3(567.6)	321.3(578.3)	326.1(587.0)
4.591(263.5)	391.5(704.8)	390.7(703.3)	0.0(0.0)	390.6(702.2)	395.5(711.9)
5.101(292.5)	384.7(717.8)	388.5(699.3)	382.2(688.1)	384.0(691.3)	0.0(0.0)
5.991(343.5)	406.2(731.2)	395.4(711.7)	384.6(692.4)	0.0(0.0)	0.0(0.0)

ANGLE RAD. (DEG.)	PS(I.D.) N/CM**2 (PSIA)	PS(O.D.) N/CM**2 (PSIA)
1.04(60.0)	60.46(87.69)	0.001 0.00)
1.83(105.0)	60.27(87.42)	0.001 0.00)
2.46(141.5)	60.27(87.41)	60.15(87.24)
3.02(173.5)	60.69(88.03)	60.67(88.00)
3.75(215.0)	60.35(87.53)	0.001 0.00)
4.42(253.5)	60.75(88.09)	60.83(88.23)
4.82(276.5)	60.81(88.20)	60.82(88.21)
5.61(321.5)	60.62(87.93)	60.80(88.19)
6.10(350.0)	60.39(87.89)	0.001 0.00)

Figure 91.

FOLDOUT FRAME 1

FOLDOUT FRAME 2

FOLDOUT FRAME 3

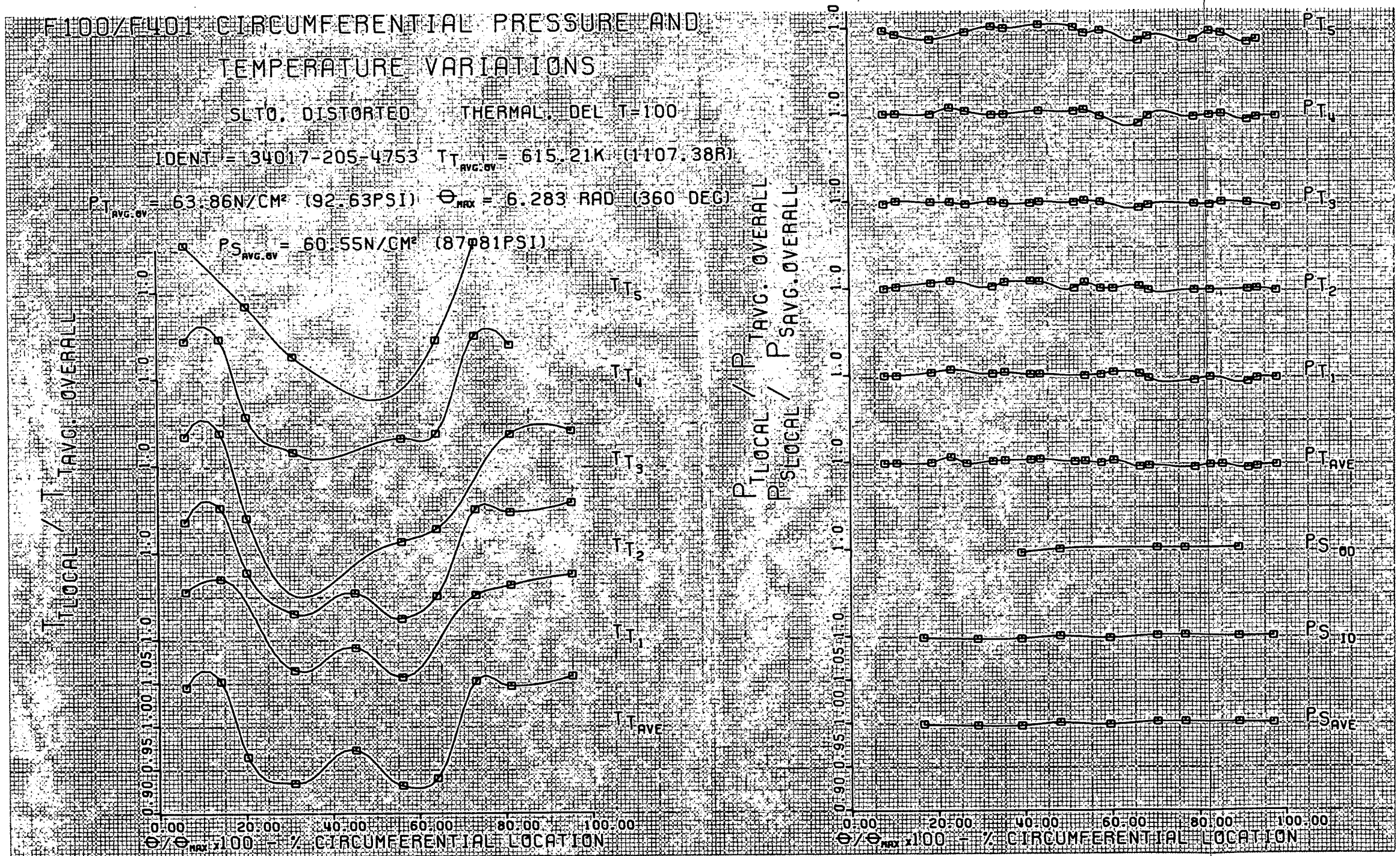


Figure 92.

DF 92003

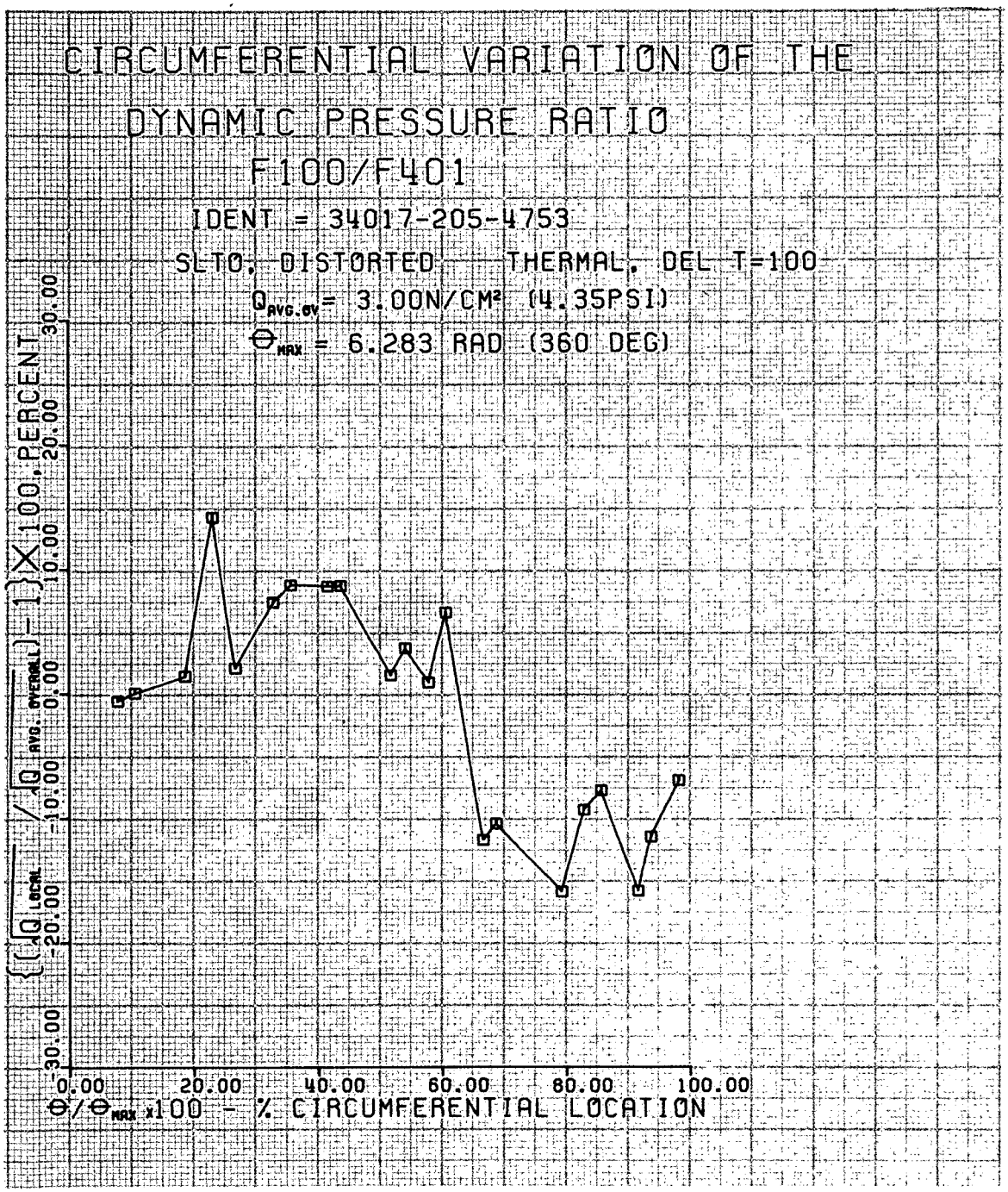


Figure 93.

DF 91972