

# **LABORATORY TEST REPORT**

## TEST RESULT OF ROCK CORES

**PROJECT: PROPOSED HANDRON BEEM STRUCTURE AT KHARGHAR, NAVI MUMBAI**

**ADDRESS OF SITE: ACTREC, TATA MEMORIAL CENTER, KHARGHAR, NAVI MUMBAI**

**CLIENT: HLL LIFECARE LIMITED**

**JOB NO: 1993**

**DATE: 17.05.2016**

SN.	BORE HOLE	DEPTH (m)	CORE DIA (cm)	HEIGHT (cm)	UCS kg/ cm <sup>2</sup> (IS: 9143)	POROSITY % (IS: 1124)	WATER ABSORPTION % (IS: 1124)	DRY DENSITY gm/cm <sup>3</sup> (IS: 1122)	SPECIFIC GRAVITY (IS: 1122)
1	BH1	4.50-6.00	5.40	10.80	187.07	0.81	0.30	2.66	2.67
2	BH1	7.50-9.00	5.40	10.80	351.88	0.40	0.15	2.74	2.76
3	BH1	10.50-12.00	5.40	10.80	302.88	0.95	0.37	2.68	2.71
4	BH2	7.00-8.50	5.40	10.80	1.69.25	1.12	0.41	2.71	2.73
5	BH2	8.50-10.00	5.40	10.80	240.52	1.62	0.60	2.69	2.72
6	BH3	4.50-6.00	5.40	10.80	253.89	0.80	0.31	2.68	2.70
7	BH3	7.50-9.00	5.40	10.80	329.61	0.81	0.29	2.72	2.75
8	BH3	10.50-12.00	5.40	10.80	378.60	0.42	0.16	2.75	2.78
9	BH4	7.50-9.00	5.40	10.80	213.79	0.80	0.30	2.70	2.73
10	BH4	9.00-10.50	5.40	10.80	244.97	0.81	0.29	2.76	2.78
11	BH4	10.50-12.00	5.40	10.80	262.79	1.21	0.45	2.71	2.74
12	BH5	7.50.9.00	5.40	10.80	115.80	2.08	0.84	2.48	2.51
13	BH5	9.00.10.50	5.40	10.80	133.620	2.02	0.82	2.45	2.46
14	BH5	10.50-12.00	5.40	10.80	120.26	1.21	0.46	2.66	2.67

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**POINT LOAD TEST RESULT OF ROCK SAMPLES  
(IS: 9143)**

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S. N.	BORE HOLE	DEPTH BGL. (M)	POINT LOAD	
			Load In (KN.)	Point Load Index (Kg./cm <sup>2</sup> )
1	1	2.80-4.50	1.5	5.55
2	2	1.00-2.50	3.0	11.10
3	3	3.00-4.50	1.0	3.70
4	4	1.50-3.00	1.5	5.55
5	4	6.00-7.50	2.0	7.40
6	5	4.50-6.00	1.5	5.55

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## CHEMICAL ANALYSIS OF WATER

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SN.	BH	PH VALUE	CL mg/lit	SO4 mg/lit
1	1	7.52	228.62	110.00
2	4	7.43	198.80	101.00
3	5	7.68	234.58	118.00
REFERENCE: IS 456-2000		(PERMISSIBLE LIMIT 6 TO 9)	AS PER IS 456-2000 MAX 2000 FOR PLAIN CONCRETE AND 500 FOR REINFORCED CONCRETE	AS PER IS 456-2000 MAX 400

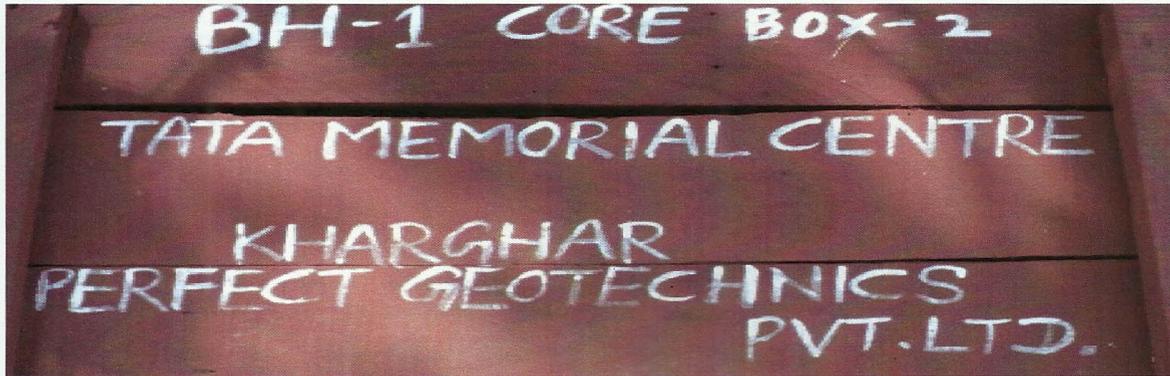
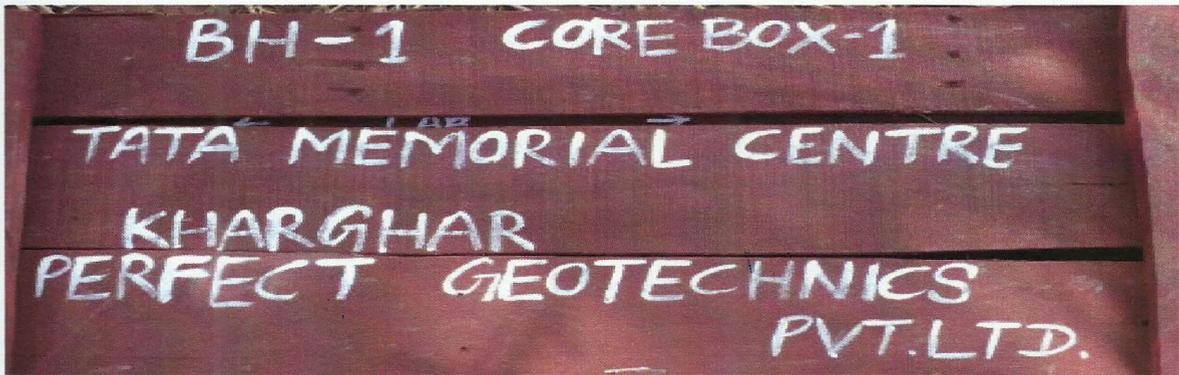
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# **PHOTOGRAPH OF CORE BOXES**

CLIENT: HLL LIFECARE LIMITED

SITE ADD.: Tata Memorial Center, Kharghar , Navi Mumbai

BH-1

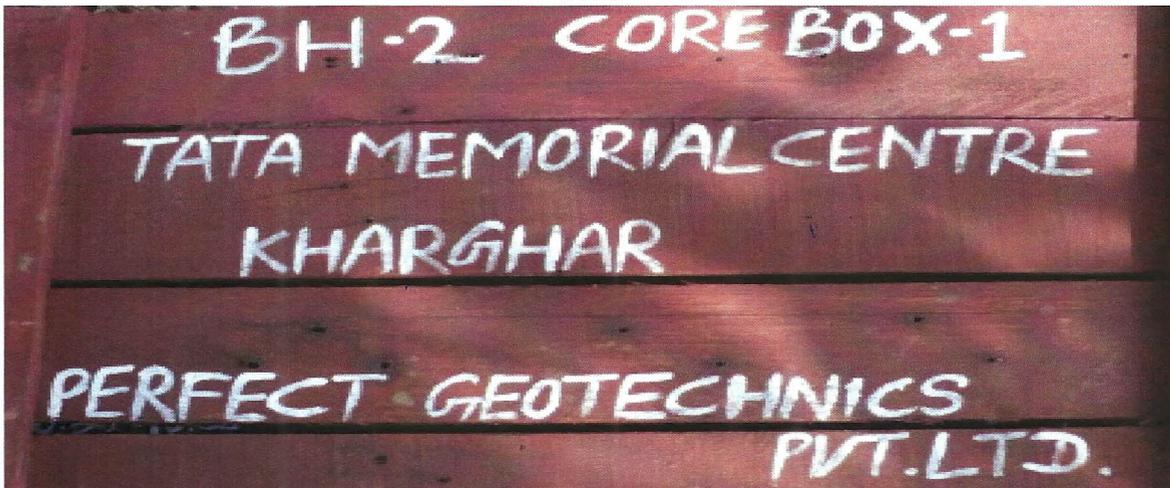


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CLIENT: HLL LIFECARE LIMITED

SITE ADD.: Tata Memorial Center, Kharghar , Navi Mumbai

BH-2

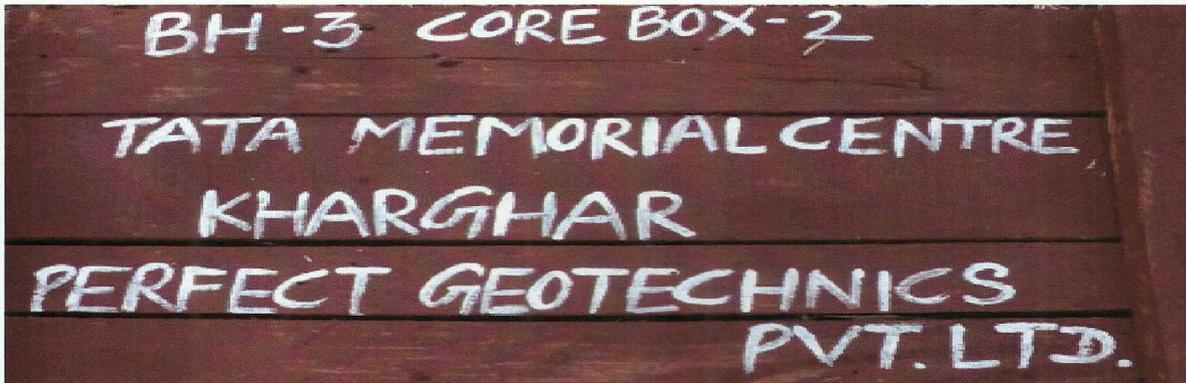
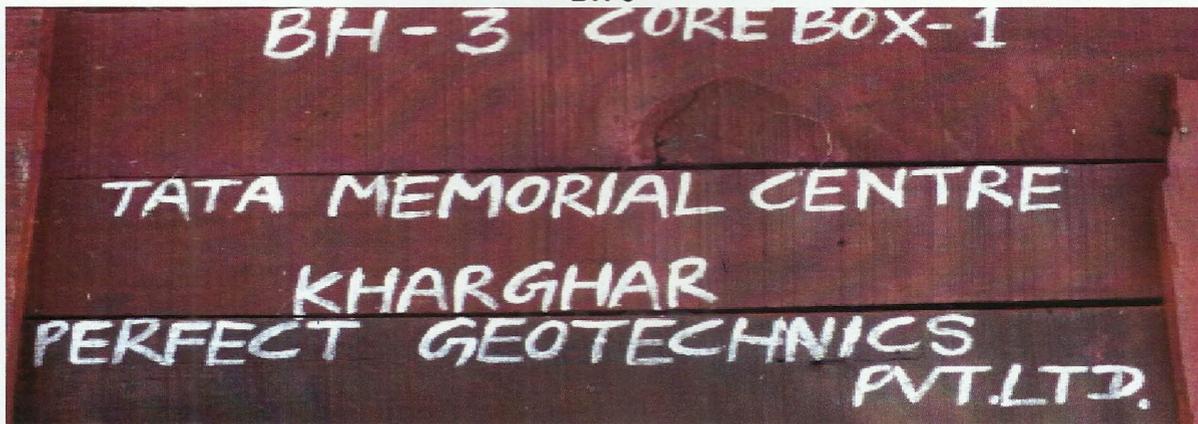


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CLIENT: HLL LIFECARE LIMITED

SITE ADD.: Tata Memorial Center, Kharghar , Navi Mumbai

BH-3

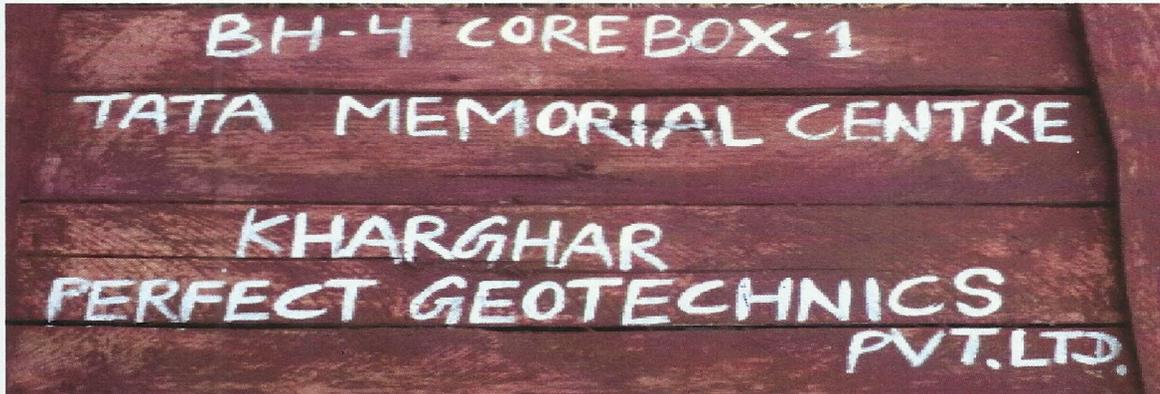


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CLIENT: HLL LIFECARE LIMITED

SITE ADD.: Tata Memorial Center, Kharghar , Navi Mumbai

BH-4

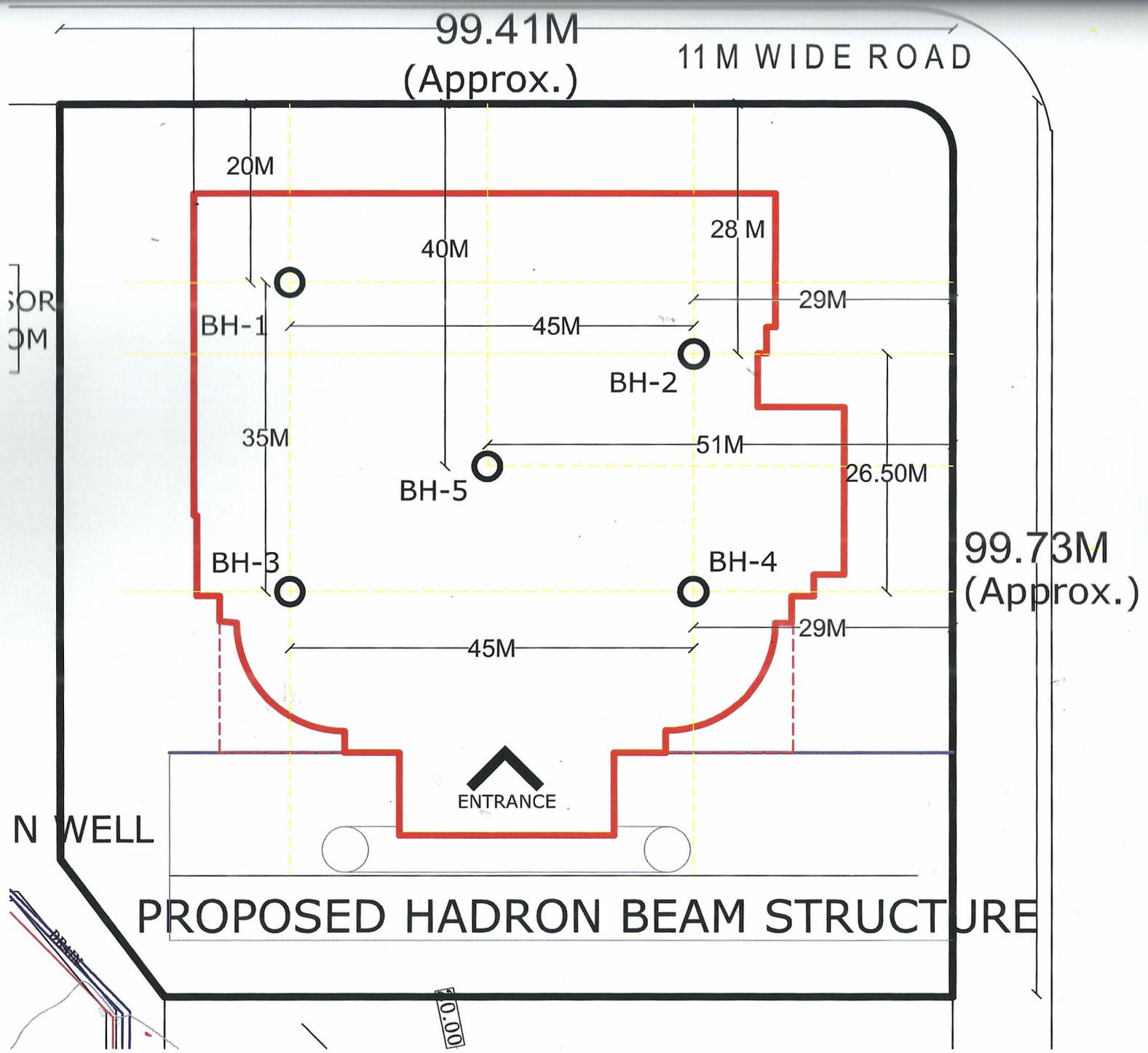


BH-5



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# LOCATION PLAN



# CONVERSION TABLES

PRESSURE		
To convert...	into...	Multiply by:
atm	bar	1.01325
	kg/cm <sup>2</sup>	1.0332
	PSI	14.696
	MPa	0.101325
	KPa	101.325
bar	atm	0.98692
	kg/cm <sup>2</sup>	1.01971
	PSI	14.504
	MPa	0.1
	KPa	100
kg/cm <sup>2</sup>	atm	0.96784
	bar	0.98067
	PSI	14.223
	MPa	0.098067
	KPa	98.0665
MPa	atm	9.869232
	bar	10
	kg/cm <sup>2</sup>	10.1971
	PSI	145.04
	KPa	1,000
KPa	atm	0.009869
	bar	0.01
	kg/cm <sup>2</sup>	0.010197
	PSI	0.145037
	MPa	0.001
PSI	atm	0.068046
	bar	0.068947
	kg/cm <sup>2</sup>	0.070307
	MPa	0.0068948
	KPa	6.89475

LINEAR		
To convert...	into...	Multiply by:
cm	ft	0.032808
	in	0.3937
	metres	0.01
	microns	10,000
	mm	10
ft	cm	30.48
	in	12
	metres	0.3048
	microns	304,800
	mm	304.8
in	cm	2.54
	ft	0.08333
	metres	0.0254
	microns	25,400
	mm	25.4
metres	cm	100
	ft	3.28083
	in	39.37
	microns	1,000,000
	mm	1,000
microns	cm	0.0001
	ft	0.00003281
	in	0.00003937
	metres	0.000001
	mm	0.001
mm	cm	0.1
	ft	0.003281
	in	0.03937
	metres	0.001
	microns	1000

VOLUME		
To convert...	into...	Multiply by:
cc	ft <sup>3</sup>	0.00003531
	in <sup>3</sup>	0.06102
	litre	0.001
	m <sup>3</sup>	0.000001
	US quart	0.0010567
ft <sup>3</sup>	cc	28,317
	in <sup>3</sup>	1728
	litre	28.317
	m <sup>3</sup>	0.028317
	US quart	29.92
in <sup>3</sup>	cc	16.387
	ft <sup>3</sup>	0.0005787
	litre	0.016387
	m <sup>3</sup>	0.0000163
	US quart	0.01732
litre	cc	1,000
	ft <sup>3</sup>	0.03531
	in <sup>3</sup>	61.023
	m <sup>3</sup>	0.001
	US quart	1.057
m <sup>3</sup>	cc	1,000,000
	ft <sup>3</sup>	35.31
	in <sup>3</sup>	61,023
	litre	1,000
	US quart	1056.8
US quart	cc	946.25
	ft <sup>3</sup>	0.03342
	in <sup>3</sup>	57.75
	litre	0.9463
	m <sup>3</sup>	0.0009463
US Gallon	cc	3,785
	ft <sup>3</sup>	0.1337
	in <sup>3</sup>	231
	litre	3.785
	m <sup>3</sup>	0.003785
US quart	4	

FLOW		
To convert...	into...	Multiply by:
cc/min	ft <sup>3</sup> /min	0.0000353145
	gal/min US	0.0002642
	in <sup>3</sup> /min	0.061
	L/min	0.001
ft <sup>3</sup> /min	cc/min	28,320
	gal/min US	7.48
	in <sup>3</sup> /min	1728
	L/min	28.32
gal/min US	cc/min	3785.4
	ft <sup>3</sup> /min	0.1337
	in <sup>3</sup> /min	231
	L/min	3.7854
in <sup>3</sup> /min	cc/min	16.39
	ft <sup>3</sup> /min	0.00057
	L/min	0.016
	gal/min US	0.004
L/min	cc/min	1,000
	ft <sup>3</sup> /min	0.03531
	in <sup>3</sup> /min	61.02
	gal/min US	0.26417

AREA		
To convert...	into...	Multiply by:
cm <sup>2</sup>	ft <sup>2</sup>	0.0010764
	in <sup>2</sup>	0.155
	m <sup>2</sup>	0.0001
	mm <sup>2</sup>	100
ft <sup>2</sup>	cm <sup>2</sup>	929.0304
	in <sup>2</sup>	144
	m <sup>2</sup>	0.092903
	mm <sup>2</sup>	92903.04
in <sup>2</sup>	cm <sup>2</sup>	6.4516
	ft <sup>2</sup>	0.006944
	m <sup>2</sup>	0.0006451
	mm <sup>2</sup>	645.16
m <sup>2</sup>	cm <sup>2</sup>	10,000
	ft <sup>2</sup>	10.76391
	in <sup>2</sup>	1.550
	mm <sup>2</sup>	1,000,000
mm <sup>2</sup>	cm <sup>2</sup>	0.01
	ft <sup>2</sup>	0.000010764
	in <sup>2</sup>	0.00155
	m <sup>2</sup>	0.000001

TEMPERATURE
deg F = (deg C x 1.8) + 32
deg C = (deg F - 32) / 1.8



**JOB NO. 1993**



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