INDRADHANUSH GAS GRID LIMITED
(Joint Venture of IOCL, ONGC, GAIL, OIL and NRL)
GUWAHATI, ASSAM

CORRIGENDUM 1

FOR

NATURAL GAS COMPRESSOR STATIONFOR NORTH EAST GAS GRID PIPELINE PROJECT OF M/s IGGL

OPEN INTERNATIONAL COMPETITIVE BIDDING

Tender no.: 05/51/23UU/IGGL/001-i-5-R1

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PREPARED AND ISSUED BY

MECON LIMITED
(A Govt. of India Undertaking)
Delhi, India

IGGL	CORRIGENDUM # 1 NATURAL GAS COMPRESSOR STATIONFOR NORTH EAST GAS GRID PIPELINE PROJET OF M/s IGGL Tender No. 05/51/23UU/IGGL/001-i-5-R1	MECON LIMITED

Date: 09.08.2022

Sl. No.	Description	Volume	Page No.	Clause / Para / Section	Amendment / Addition / Modification / Deletion	
1	Eligible bidders	Volume-I	Page no. 56 of 338	2.9.c)	Addition	Clause no. 2.9.c) shall be added as **"Tie-up agreement by the bidder with more than one OEM/authorized packager of OEM of natural gas compressor is permitted."**
2	Payment against Performance guarantee test	Volume-I	Page no. 306 of 338	39.5	Modification	The clause "In case, the performance guarantee test has not been carried out for reasons attributable to the Employer within a period of six month from the date of commissioning mentioned in Commissioning Certificate, the Contractor shall receive payment towards Performance Guarantee, against Bank Guarantee of equal value to be valid for a period of 12 (twelve) months beyond aforesaid six (6) months period and conducting of the Performance Guarantee Tests and its commercial implications, if any, shall be mutually finalized between the parties." shall be replaced by **In case the Performance Guarantee test has not been carried out for reasons attributable to the Employer within a period of 12 (twelve) months from the date of commissioning mentioned in the commissioning certificate, the contractor will receive payment for Performance Guarantee Tests against Bank Guarantee of equal value to be valid for a period of 12 (twelve) months beyond aforesaid 12 (twelve) months period. Conduction of the Performance Guarantee Tests and its commercial implications, if any, shall be mutually finalized between the parties."**
3	Topographical survey	Volume-2, Part-1	Page no. 22 of 1910	3.02	Amendment	The Clause "The topographical survey and geotechnical investigation are not included in scope of work, as these are being done through a separate package." shall stand modified as **"A preliminary geotech report and topographical survey is provided (Annexure-1: Geotech report, Annexure-2: Topographical survey) for only guidance of the bidder. However, detailed geotech investigation shall be included in the scope of the bidder."** The specification for geotech work is attached as **Annexure-3** to this corrigendum. All instances, in the tender document, of exclusion of Geo-tech investigation from the scope of work of the bidder stands deleted. The attached preliminary topographical survey drawing covers the land partly, and the complete & final topographical drawing will be made available to the successful bidder.
4	Mechanical workshop	Volume-2, Part-2	Page no. 1014 of 1910	List of equipment	Modification	The specification of lathe machine and vertical type hydraulic press machine shall be as mentioned ahead . **Lathe machine shall be automatic type capable of turning, taper turning, thread cutting etc. SOB shall be considered as 550mm, CD shall be considered as 2000mm, power rating shall be around 11KW.** **Vertical type hydraulic press machine with capacity of 200 tonnes shall be considered.**
5	Gas detection system	Volume-2			Addition	Gas detection system shall be provided. The specification is attached as **Annexure-4** to this corrigendum.
6	DG set	Volume-2, Part-1	213 of 1990	04.05.02	Modification	The specification for DG set mentioned in Clause no. 04.05.02 is replaced by **Annexure-5** to this corrigendum.
7	Price schedule	Volume-1			Modification	Price schedule has been modified. Refer **Annexure-6** to this corrigendum

IGGL	CORRIGENDUM # 1 NATURAL GAS COMPRESSOR STATIONFOR NORTH EAST GAS GRID PIPELINE PROJET OF M/s IGGL Tender No. 05/51/23UU/IGGL/001-i-5-R1	MECON LIMITED

Date: 09.08.2022

Sl. No.	Description	Volume	Page No.	Clause / Para / Section	Amendment / Addition / Modification / Deletion	
8	Operation & maintenance spares	Volume-2			Modification	Wherever the item wise price list for 2 years operation & maintenance spares is mentioned, it shall be read as item wise price list for 5 years operation & maintenance spares.
9	COMC	Volume-2		Chapter-16	Addition	The contractor shall submit, for client's approval, bio-data/credentials of personnel to be deployed for COMC.
10	Control Building Drawing	Volume-2			Addition	The drawing indicating the size of builing is enclosed as **Annexure-1A, 1B & 1C** to this corrigendum.
11	RESTRICTING PARTICIPATION OF NCLT REFERRED BIDDERS	I	24 of 338	New Clause M to Section-II	Additional	The clause M to Section-II is appended as below:- RESTRICTING PARTICIPATION OF NCLT REFERRED BIDDERS i. Offer from the following type of bidders / members of consortium will not be considered: a) Bidders who are undergoing insolvency resolution process or liquidation or bankruptcy proceeding under Insolvency and Bankruptcy Code, 2016 (Code). b) Bidders whose resolution process or liquidation or bankruptcy proceeding is initiated under the Code at any stage of evaluation of bid. ii. It will be responsibility of the bidder/contractor/vendor to inform IGGL/PMC within 15 (Fifteen) days from the date of order of insolvency resolution process or liquidation or bankruptcy proceeding passed by the Adjudicating Authority namely National Company Law Tribunal (NCLT) or Debt Recovery Tribunal (DRT) under the Code. iii. If bidder fails to share the information regarding their status of insolvency resolution process or liquidation or bankruptcy proceeding in their bid or at any latter stage, their offer is liable to be rejected by IGGL/PMC. iv. IGGL/PMC reserve the right to cancel / terminate the contract without any liability on the part of IGGL/PMC immediately on the commencement of insolvency resolution process or liquidation or bankruptcy proceeding of any party under the contract. A declaration in this regard shall be furnished by the bidder as per proforma enclosed as **Annexure-7** to this Corrigendum

All other terms & conditions of tender document remain unaltered.

ANNEXURE-1

REPORT ON
GEOTECHNICAL INVESTIGATION WORK
FOR
COMPRESSOR STATION OF NORTH - EAST NATURAL GAS GRID PIPELINE PROJECT.

: CLIENT:

IGGL

INDRADHANUSH GAS GRID LIMITED

: PMC:

ISO 9001 Company

MECON LTD

:CONTRACTOR:

OP

OVAL PROJECTS ENGINEERING PVT. LTD.

REPORT PREPARED BY:

RELIANT FOUNDATIONS PVT LTD

(An ISO 9001:2015 certified company)

Sun-Polo Colony ,Byelane - DiparBoroPath ,
NearAyursundraSuperspecialty Hospital,
Ahomgaon ,GARCHUK Guwahati-781035

PHONE NO: 09435192896, 7086020945

Email: rel_engrs@yahoo.com

1. The work of soil Investigation was awarded to RELIANT FOUNDATIONS PVT. LTD.
Sun-Polo Colony, Byelane - Dipar Boro Path,Near Ayursundra Superspecialty Hospital , Ahomgaon , Garchuk Guwahati-781035.

2. Soil investigation work by making boreholes :

2.1 The field and laboratory investigations carried out by us to access the nature of sub-strata and to evaluate the soil parameters required for design of foundations proposed to be constructed for proposed construction.

2.2 Client's help is gratefully acknowledged in providing bore hole locations, close supervision and checking during boring, sampling, various testing operations and cooperation and guidance during finalization of report.

2.3 This report is based upon the results of field, laboratory tests conducted on selected soil samples collected from borehole locations.

3. SCOPE OF WORK:-

The scope of work provided to us for this project was limited to the following:-

3.1 Mobilizing necessary plant, equipments and personnel to the project site, setting up the equipment, carrying out the field investigations on land and demobilization on completion of work.

3.2 Making 150 mm nominal diameter bore holes at the site in all types of soil using suitable approved method of boring to be given at site by the Engineer-in-Charge. Refusal shall mean when SPT field 'N' value reaches 100 for 30 cm or less penetration of SPT sampler.

3.2.1 Conducting standard penetration tests in the bore holes at 1.50 m interval in depth as per specifications / instructions of Engineer-in-Charge.

3.2.2 Collecting undisturbed soil samples from bore holes at 3.0m interval or every change of strata, whichever is earlier as per specifications.

3.2.3 Collecting disturbed soil samples from bore hole at regular interval and at every identifiable change of strata to supplement the boring records.

3.2.4 Recording the depth of ground water table in all the bore hole if observed up to the depth of exploration during boring work as per specifications & withdrawing the casing pipe.

3.3 Conducting the following laboratory tests on selected disturbed / undisturbed soil samples collected from bore hole / test locations :-

(a) Bulk density and Moisture content
(b) Sieve analysis
(c) Hydrometer analysis
(d) Liquid limit & Plastic limits
(e) Specific gravity
(f) Shear test on undisturbed and remoulded saturated disturbed soil samples
(g) Determination of void ratio.

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3.4 Preparation and submission of report in three copies.

4.0 FIELD INVESTIGATIONS:

4.1Necessary plant, equipment and personnel for conducting the requisite field work were mobilized to the site.

4.2 Bore hole was bored at this site using Auger and wash boring method as per **IS: 1892-1979.** Casing or Bentonite has been used as required to retain the bore hole. Depth of Bore holes were **15.0M** each.

4.3.1 **Standard penetration** tests were conducted in the above bore hole at every 1.50 m interval & at change of strata as per specifications / instructions of Engineer-in-Charge. The bore was cleaned up to the desired depths. Standard split spoon sampler attached to lower end of 'A' drill rods was driven in the bore holes by means of standard hammer of 63.5 Kg. falling freely from a height of 75 cm. The sampler was driven 45 cm as per specifications & the numbers of blows required for each 15 cm penetration were recorded. The numbers of blows for the first 15 cm penetration were not taken into account. This was considered as seating drive. The numbers of blows for next 30 cm penetration were designated as SPT 'N' value. Wherever the total penetration was less than 45 cm, the number of blows & the depth penetrated is incorporated in respective bore logs. Disturbed soil samples obtained from standard split spoon sampler for all the above standard penetration tests were collected in polythene bags of suitable size. These samples were properly sealed, labeled, recorded and carefully transported to the laboratory for testing.

4.3.2 **Undisturbed** soil samples were collected from the bore hole at every 3.00 m interval in depth & at change of strata as per sampling specifications. These sampling tubes after retrieval from the bore hole was properly waxed and sealed at both ends. These were carefully labeled and transported to the laboratory for testing. Undisturbed soil samples wherever slipped during lifting, were duly marked in the field bore logs as well as in the soil profile.

4.3.3 **Disturbed soil** samples were also collected from the bore hole at suitable depths/intervals to supplement the boring records. These samples were collected in polythene bags of suitable size. These samples were properly sealed, labeled, recorded & carefully transported to the laboratory for testing.

4.3.4 The depth of ground water table was checked / measured in all bore holes.

4.3.5 **Summary of bore holes:-**

Sl. No	Borehole number	Depth of borehole (M)	Depth of water table (M)	Co-ordinate
1	BH1	15.0	0.15 (Above)	X=376785.2627 Y=2914740.1446
2	BH2	15.0	0.16 (Above)	X=376749.2658 Y=2914690.1446
3	BH3	15.0	0.12 (Above)	X=376676.4680 Y=2914714.2256
4	BH4	9.50	0.14 (Above)	X=376699.3618 Y=2914640.1446
5	BH5	13.50	0.15 (Above)	X=376763.0530 Y=2914611.4454
6	BH6	15.0	0.18 (Above)	X=376699.3618 Y=2914570.4949
7	BH7	15.0	0.17 (Above)	X=376766.8629 Y=2914540.1446
8	BH8	15.0	0.18 (Above)	X=376827.9416 Y=2914575.5304
9	BH9	15.0	0.10 (Above)	X=376899.2658 Y=2914590.1446
10	BH10	15.0	0.20 (Above)	X=373710.8636 Y=2914500.0107
11	BH12	15.0	0.20 (Above)	X=376833.4520 Y=2914506.5834
12	BH13	15.0	0.18 (Above)	X=376890.4529 Y=2914532.6933
13	BH14	15.0	0.15 (Above)	X=376942.7294 Y=2914540.1446
14	BH15	15.0	0.23 (Above)	X=376899.3618 Y=2914477.4436

15	BH16	15.0	0.10 (Above)	X=376967.8774 Y=2914471.4027

NOTE: Couldnot not be performed due to waterlogging of 3feet.

5.0 LABORATORY INVESTIGATIONS:

5.1 The following laboratory tests were conducted on selected soil samples recovered from bore hole / test locations: -

(a) Bulk density and Moisture content

(b) Sieve analysis

(c) Hydrometer analysis

(d) Liquid limit & Plastic limits

(e) Specific gravity

(f) Shear test on remolded and saturated disturbed soil samples

(g) Determination of void ratio..

All the above laboratory tests were carried out as per relevant Indian Standards. All the soil samples were identified and classified as per IS: 1498-1970.

6.0 FINDING OF GEOTECHNICAL INVESTIGATION:

The study of bore logs/results of laboratory and other field tests are tabulated through different tables as annexure.

7.0 CALCULATION OF BEARING CAPACITY

A. Calculation of Net Safe Bearing Capacity based on shear Criteria

IS: 6403-1981 recommends the following equation to calculate the net Safe Bearing Capacity ' q_s' based on Hansen's Bearing Capacity analysis:

$$q_s = 1/F \{CNc\, S_c\, d_c\, I_c + q\,(N_q - 1)\, S_q\, d_q\, i_q + 0.5\, \gamma\, B\, N_\gamma\, S_\gamma\, d_\gamma\, i_\gamma \times R_w\}$$

Where, C = Cohesion of soil.

γ = Saturated Density of soil

B = Width of footing = 2.0 m (assumed)

R_w = Water table correction factor depending upon position of water table with respect to founding level

Q = Effective surcharge at footing level = γ D (D = depth of footing)

N_c, Nq , N_γ = Bearing capacity factor

S_c, S_q ,S_γ = Shape factor

d_c, d_q, d_γ = depth factor

i_c, i_q , i_γ = inclination factors

F = Factor of safety =2.5

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B) **Calculation of safe bearing pressure based on tolerable settlement.**

The safe bearing pressure is to be found out from the elastic settlement consideration and is found from the following equation given I.S. 8009 (part-1) 1976

$S_f = S_{oed} = (H_t/ 1+e_o)\, C_c \log_{10} (po + \Delta p)/ p_o$

S_f = Final settlement in mm

S_{oed} = Settlement computed from one dimensional test

H_t = Thickness of soil layer in m

e_o = Initial void ratio at mid height of of layer

C_c = Compression Index

Po = Initial effective pressure at mid height of layer

Δp = pressure increment

For the computation of settlement of foundation founded at certain depth, a correction should be applied to the calculated S_f in the form of a depth factor to be read from

Fig: 12 of I.S. 8009 (part-1) 1976.

Corrected settlement $S_{fd} = S_f$ x depth factor

Depth factor is dependent on the following

i. D= Depth of footing ii. L= Length of footing iii. B= Width of footing

For granular soil settlement is calculated from the *method Based on Dynamic PetutrationTest as per IS 8009-Part-I, 1976, reaffirmed 1998*

— Settlement of a footing of width *B* under unit **intensity** of pressure resting on dry cohesion less deposit with known standard **penetration** resistance value N, (determined according to IS: 2131- 1963t), may be read from Fig. 9 (*IS 8009-Part-I)* . The settlement under any other pressure may be **computed by** assuming that the settlement is proportional to the intensity of pressure.

8.0Pile load capacity (compression)

Ultimate bearing capacity in compression, Q_U from IS: 2911(Part-I/ Sec 2)-2010

$Qu = Q_P + Q_s$

= End bearing resistance + Frictional resistance of pile in sand and clay.

$Qu = [Ap\ \{(c\ Nc\}]$ or $Ap\ [\ 1/2\ D\ \gamma\ N\gamma + P_D\ Nq)] + \Sigma\ K\ P_{Di}\ \tan\delta\ A_{Si} + \alpha\ Ca\ As + Ap\ Nc\ Cp$

$Q_P = [Ap\ Nc\ Cp]$ or $Ap\ [1/2\ D\ \gamma\ N\gamma + P_D\ Nq)]$

$Q_s = Q_{sc} + Q_{ss}$

$Q_{ss} = \Sigma\ K\ P_{Di}\ \tan\delta\ A_{Si}$

$Q_{sc} = \alpha\ Ca\ As$

Q_{pc} = End bearing resistance in clay = Ap Nc Cp

$Qsafe = Q_U/FOS = Q_U/2.5$

Where

Ap = Cross sectional area of pile toe in cm^2.

$N\gamma$, Nq = bearing capacity factors depending upon the angle of internal friction

α = Adhesion factor (refer Fig 2, Annex-B, IS: 2911(Part-I/ Sec 2)-2010)

K = earth pressure coefficient Value lies between 1-1.5) Note 3 , Cl B-1 , Annex-B , IS: 2911(Part-I/ Sec 2)-2010)

δ = Angle of wall friction may be taken equal to the friction angle of the soil around the pile stem.

As = Circumferential area of pile stem = Πx l x d

l = Length of embedment.

d = Diameter of the pile.

Pile load capacity (uplift)

Ultimate uplift capacity Q_{Uf} = Skin friction + Self weight of pile

$= Q_s + Q_{self\ wt}$

8. RECOMMENDATION OF FOUNDATION:

After obtaining the laboratory test results of the samples collected from the field and analyzing the subsoil parameters in a very careful manner, the net safe bearing capacities of isolated footing foundation at different depths are calculated and shown below.

Table1:- SAFE BEARING CAPACITIES OF FOOTING FOUNDATIONS:-

Location	Depth of footing from EGL (M)	Footing size (M^2)	Net Safe Bearing Capacities (Metric Ton /Sqm.)
BH 1	2.00	2.0×2.0	9.65
	2.50	2.0×2.0	10.28
	3.00	2.0×2.0	10.91
BH 2	2.00	2.0×2.0	10.75
	2.50	2.0×2.0	11.43
	3.00	2.0×2.0	12.11
BH 3	2.00	2.0×2.0	8.25
	2.50	2.0×2.0	8.77
	3.00	2.0×2.0	9.29
BH 4	2.00	2.0×2.0	9.04
	2.50	2.0×2.0	9.59
	3.00	2.0×2.0	10.15
BH 5	2.00	2.0×2.0	10.20
	2.50	2.0×2.0	10.86
	3.00	2.0×2.0	11.51
BH 6	2.00	2.0×2.0	9.57
	2.50	2.0×2.0	10.14
	3.00	2.0×2.0	10.72
BH 7	2.00	2.0×2.0	10.20
	2.50	2.0×2.0	11.43
	3.00	2.0×2.0	12.11
BH 8	2.00	2.0×2.0	8.25
	2.50	2.0×2.0	8.77
	3.00	2.0×2.0	9.29
BH 9	2.00	2.0×2.0	10.25
	2.50	2.0×2.0	11.49
	3.00	2.0×2.0	12.18

BH 10	2.00	2.0×2.0	12.22
	2.50	2.0×2.0	12.91
	3.00	2.0×2.0	13.61
BH 12	2.00	2.0×2.0	8.48
	2.50	2.0×2.0	9.61
	3.00	2.0×2.0	10.20
BH 13	2.00	2.0×2.0	7.40
	2.50	2.0×2.0	8.70
	3.00	2.0×2.0	9.20
BH 14	2.00	2.0×2.0	6.35
	2.50	2.0×2.0	6.77
	3.00	2.0×2.0	7.20
BH 15	2.00	2.0×2.0	5.30
	2.50	2.0×2.0	5.67
	3.00	2.0×2.0	6.05
BH 16	2.00	2.0×2.0	8.25
	2.50	2.0×2.0	9.04
	3.00	2.0×2.0	10.15

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RCC Pile Foundation:-

The load carrying capacities of bored cast in situ uniform diameter piles of 7.0M to 15.0M length with pile diameters 45cm, 50cm and 60cm. respectively are calculated and shown in Table2.

Table2: Safe Load carrying capacity of bored cast in situ uniform diameter pile

Location	Pile Stem Dia. (cm)	Length of Pile from E.G.L. (m)	Pile Cutoff Length (m)	Recommended Safe Load Carrying Capacity (tone)		Safe load on pile in lateral (Metric ton)
				Compression	Uplift	
BH 1	45	7.00	1	11.43	5.26	4.99
	50		1	13.40	6.00	6.16
	60		1	17.78	7.55	8.87
	45	8.00	1	12.85	6.52	4.99
	50		1	14.99	7.42	6.16
	60		1	19.68	9.33	8.87
	45	10.0	1	15.70	9.03	4.99
	50		1	18.15	10.27	6.16
	60		1	23.48	12.89	8.87
	45	12.00	1	18.55	11.55	4.99
	50		1	21.32	13.12	6.16
	60		1	27.28	16.45	8.87
	45	14.00	1	21.40	14.06	4.99
	50		1	24.49	15.97	6.16
	60		1	31.08	20.02	8.87
	45	15.00	1	22.83	15.31	4.99
	50		1	26.07	17.40	6.16
	60		1	32.98	21.80	8.87
BH 2	45	10.00	1	19.39	9.00	4.99
	50		1	24.01	10.23	6.16
	60		1	33.26	12.85	8.87
	45	11.00	1	21.30	10.60	4.99
	50		1	26.13	12.04	6.16
	60		1	38.21	15.09	8.87
	45	14.00	1	28.56	16.50	4.99

	50		1	34.20	18.69	6.16
	60		1	47.89	23.28	8.87
BH2	45	15.00	1	31.49	18.84	4.99
	50		1	37.46	21.31	6.16
	60		1	51.80	26.49	8.87
BH 3	45	7.00	1	10.27	4.97	4.99
	50		1	12.03	5.67	6.16
	60		1	15.91	7.16	8.87
	45	8.00	1	11.60	6.16	4.99
	50		1	13.50	7.02	6.16
	60		1	17.68	8.84	8.87
	45	10.0	1	14.24	8.52	4.99
	50		1	16.44	9.71	6.16
	60		1	21.21	12.21	8.87
	45	12.0	1	16.89	10.89	4.99
	50		1	19.38	12.40	6.16
	60		1	24.73	15.58	8.87
	45	14.0	1	19.54	13.26	4.99
	50		1	22.32	15.08	6.16
	60		1	28.26	18.95	8.87
	45	15.0	1	20.86	14.44	4.99
	50		1	23.76	16.43	6.16
	60		1	30.03	20.63	8.87
BH 4	45	9.00	1	16.37	7.00	4.99
	50		1	19.72	7.99	6.16
	60		1	26.53	10.08	8.87
	45	10.0	1	17.81	8.27	4.99
	50		1	22.10	9.42	6.16

	60		1	30.71	11.87	8.87
BH4	45	12.0	1	21.41	11.32	4.99
	50		1	26.11	12.87	6.16
	60		1	37.78	16.15	8.87
	45	14.0	1	26.00	15.07	4.99
	50		1	31.21	17.10	6.16
	60		1	43.90	21.37	8.87
	45	15.0	1	28.66	17.21	4.99
	50		1	34.16	19.51	6.16
	60		1	47.44	24.32	8.87
BH 5	45	9.00	1	18.51	8.53	4.99
	50		1	22.10	9.68	6.16
	60		1	29.39	12.11	8.87
	45	10.00	1	20.29	10.04	4.99
	50		1	24.87	11.39	6.16
	60		1	34.03	14.24	8.87
	45	12.0	1	24.63	13.61	4.99
	50		1	29.68	15.42	6.16
	60		1	42.07	19.21	8.87
	45	14.0	1	29.92	17.88	4.99
	50		1	35.57	20.22	6.16
	60		1	49.13	25.11	8.87
	45	15.0	1	32.94	20.27	4.99
	50		1	38.92	22.90	6.16
	60		1	53.15	28.40	8.87
BH 6	45	7.00	1	10.49	3.91	4.99
	50		1	12.52	4.50	6.16
	60		1	17.14	5.75	8.87
	45	8.00	1	13.06	5.08	4.99

	50		1	15.54	5.82	6.16
	60		1	21.13	7.41	8.87
BH6	45	10.0	1	17.33	7.93	4.99
	50		1	21.58	9.05	6.16
	60		1	32.35	11.42	8.87
	45	12.0	1	21.60	11.46	4.99
	50		1	26.33	13.02	6.16
	60		1	38.04	16.34	8.87
	45	14.0	1	26.83	15.66	4.99
	50		1	32.13	17.76	6.16
	60		1	45.00	22.15	8.87
	45	15.00	1	29.79	18.02	4.99
	50		1	35.42	20.41	6.16
	60		1	48.96	25.41	8.87
BH 7	45	7.00	1	9.56	4.22	4.99
	50		1	11.28	4.84	6.16
	60		1	15.12	6.16	8.87
	45	8.00	1	11.19	5.62	4.99
	50		1	13.09	6.42	6.16
	60		1	17.29	8.13	8.87
	45	10.0	1	14.44	8.42	4.99
	50		1	16.70	9.59	6.16
	60		1	21.62	12.08	8.87
	45	12.0	1	17.70	11.22	4.99
	50		1	20.32	12.76	6.16
	60		1	25.96	16.02	8.87
	45	14.0	1	20.95	14.02	4.99
	50		1	23.94	15.93	6.16
	60		1	30.30	19.97	8.87
	45	15.0	1	22.58	15.42	4.99
	50		1	25.74	17.52	6.16
	60		1	32.47	21.94	8.87