



KENYA ELECTRICITY GENERATING COMPANY PLC

KGN-OPS-04-2023

RFx: 5000012357

TENDER FOR SUPPLY OF ENGINEERING MATERIALS AND WORKSHOP CONSUMABLES FOR KenGen PLANTS. Framework Contract for Three (3) Years (Open National)

Date: 20th April, 2023

Addendum No. 2

In accordance with the **Tender for Supply of Engineering Materials and Workshop Consumables for KenGen Plants**, KenGen issues **Addendum No. 2** as follows:

I. REVISED PRICE SCHEDULES

PRICE SCHEDULE FORMS

[The tenderer shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the Price Schedules shall coincide with the List of Goods and Related Services specified by the Procuring Entity in the Schedule of Requirements.]

PRICE SCHEDULE

SCHEDULE 1: SUPPLY OF ENGINEERING MATERIALS

As per specifications outlined in **Section V - Schedule of requirements**.

1. STAINLESS STEEL GRADE 304

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
	SHEET			
1	8' x 4' x 1.5mm	PC		4
2	8' x 4' x 4.0mm	PC		4
3	CHEQURED			
4	8' x 4' x 3.0mm	PC		4
ROUND TUBE (Diameter x Thickness)				
5	3" x 1.5mm	M		20

TENDERER'S NAME: _____

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2. STAINLESS STEEL GRADE 316

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
No	SHEET			
1.	8' x 4' x 3.0mm	PC		3
2.	8' x 4' x 35mm	PC		3
3.	8' x 4' x 45mm	PC		2
RODS (Diameter mm)				
4.	16	m		20
5.	30	m		20
6.	57	m		20
7.	63.5	m		20
8.	65	m		20
9.	70	m		20
10.	75	m		20

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3. STAINLESS STEEL FITTINGS GRADE 316

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
PIPE SCHEDULE 10				
1	1/2"	m		30
2	3/4"	m		30
3	1"	m		30
4	1 1/2"	m		30
5	2	m		30
6	2 1/2"	m		30
7	3"	m		30
TEE				
8	1/2"	PC		10
9	3/4"	PC		10
10	1"	PC		10
11	1 1/2"	PC		10
12	2	PC		10
13	2 1/2"	PC		10
14	3"	PC		10
UNION				
15	1/2"	PC		10
16	3/4"	PC		10
17	1"	PC		10
18	1 1/2"	PC		10
19	2"	PC		10
20	2 1/2"	PC		10
21	3"	PC		10

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4. SPECIAL STEELS

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
EN9 (Diameter mm)				
1	16	M		10
2	20	M		10
3	30	M		10
4	50	M		10
EN19 (Diameter mm)				
5	30	M		10
6	50	M		10
EN24 (Diameter mm)				
7	30	M		10
8	50	M		10
9	80	M		10

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5. MILD STEEL

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
SHEET				
1	8' x 4' x 1.2mm	PC		3
2	8' x 4' x 8.0mm	PC		3
3	8' x 4' x 12.0mm	PC		3
4	8' x 4' x 25.0mm	PC		3
RODS				
5	1"	m		
6	1 1/2"	m		20
7	2"	m		20
8	3	m		20
9	4"	m		20
SQUARE TUBES				
10	25x25x2mm	m		
11	40x40x2mm	m		30
				30
ANGLE IRON (mm)				
12	20x20x3	m		30
13	30x30x3	m		30
14	40x40x4	m		30
15	75x75x6	m		30
IPE I-BEAMS MILD STEEL 20 ft length				
16	100mmX55mm/8.1kg/m	PC		5
U-CHANNEL MILD STEEL (Diameter x Thickness) 20 ft length				
17	5"X2.5"	PC		3
FLAT BAR MILD STEEL				
18	2"X1/2"	m		30
19	1/2"X2 1/2"	m		30
20	1/2"X3"	m		30
21	3/8"X 1 1/2"	m		30

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6. GI PIPES

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
CLASS B- LENGTH 20 FT, SIZE				
1	3/8"	PC		5
2	1/2"	PC		5
3	3/4"	PC		5
4	1"	PC		5
5	1 1/4"	PC		5
6	1 1/2"	PC		5
7	2"	PC		5
8	2 1/2"	PC		5
9	3"	PC		5

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7. SEAMLESS PIPES

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
SCHEDULE 40 (Size x wall thickness)				
1	2" x 3.91	M		30
2	3" x 5.49	M		30
3	4" x 6.02	M		30
4	6" x 7.11	M		30
5	8" x 8.18	M		30
5	10" x 9.27	M		30
6	12" x 10.31	M		30
7	14" x 11.13	M		20
8	16" x 12.70	M		20
9	18" x 14.27	M		10
10	20" x 15.06	M		10
11	24" x 17.48	M		10
12	32" x 17.48	M		10
SCHEDULE 80 (Size x wall thickness) 20ft length				
13	1" x 4.55	PC		2
16	2" x 5.54	PC		2
17	3" x 7.62	PC		2
18	4" x 8.56	PC		2
19	6" x 10.97	PC		2
20	8" x 12.7	PC		2
21	10" x 15.07	PC		2
22	12" x 17.35	PC		2
SEAMLESS FITTINGS				
SCHEDULE 40 ELBOW 90°				
23	2"	PC		10
24	3"	PC		10
25	4"	PC		10
29	6"	PC		10
30	8"	PC		10
31	10"	PC		10
32	12"	PC		10
33	14"	PC		10
34	16"	PC		10
35	18"	PC		10
36	20"	PC		10
SCHEDULE 40 TEE				
37	2"	PC		10
38	3"	PC		10
39	4"	PC		10
40	6"	PC		10
41	8"	PC		10
42	10"	PC		10
29	12"	PC		10
30	14"	PC		10
31	16"	PC		10

32	18"	PC		10
33	20"	PC		10
CONCENTRIC REDUCER SCH 40				
45	3" x 2"	PC		10
46	4" x 2"	PC		10
47	4" x 2 1/2"	PC		10
48	4" x 3"	PC		10
49	5" x 3"	PC		10
50	6" x 3"	PC		10
51	6" x 4"	PC		10
52	8" x 6"	PC		10
53	10" x 6"	PC		10
54	10" x 8"	PC		10

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8. PHOSPHOR BRONZE

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
ROUND SOLID (Inches)				
1	1 1/2	m		10
2	2	m		10
3	3	m		10
4	4 1/2"	m		10
5	6	m		10
HOLLOW ROUND (Inches)				
6	2 1/2 x 1 1/4	m		10
7	3 x 1 1/2	m		10
8	3 1/2 x 2	m		10
9	4 x 2	m		10
10	4 1/2 x 3	m		10
11	5 x 2 1/2	m		10
12	5 1/2 x 3 1/2	m		10
13	6 x 3	m		10

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9. Copper

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
ROUND BAR (Diameter in mm)				
1	13	m		10
2	16	m		10
3	20	m		10
4	50	m		10
5	65	m		10

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10. BRASS

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
SOLID ROUND (Diameter in Inches)				
1	$\frac{3}{4}$	m		10
2	1 $\frac{1}{8}$	m		10
3	2 $\frac{1}{4}$	m		10
4	3 $\frac{1}{2}$	m		10

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11. ALUMINUM

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
ROUND SOLID Diameter in mm				
1	50	m		10
2	100	m		10
3	160	m		10

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12. TEFLON

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
1	30	m		10
2	40	m		10
3	50	m		10
4	65	m		10
5	80	m		10
6	100	m		10
7	150	m		10
8	200	m		10
	SHEET			
9	1m x 1m x 30mm	PC		5

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13. THORDON

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
	SHEET			
1	1m x 1m x 35mm	PC		3

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14. COLD WORK TOOL STEEL

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
	ROD(DIAMETER)			
1	40mm	m		2

TENDERER'S NAME: _____

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15. WHITE METAL COMPOUNDS

	ITEM	UOM	UNIT PRICE	Estimated Annual consumption
1	White metal	kg		200
2	Tinning powder	kg		20
3	Tinning sticks	kg		50

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16. PPR PIPES AND FITTINGS

	ITEM (Size can be in inches or mm, depending on source)	UOM	UNIT PRICE	Estimated Annual consumption
PPR PIPE, PN20 – Manufactured to ISO 15874 standards or approved equivalent, made of 100% Virgin PP-R material				
1.	1/2"	m		100
2.	3/4"	m		100
3.	1"	m		100
4.	1 1/2"	m		50
5.	2"	m		50
6.	2 1/2"	m		50
7.	3"	m		50
PPR PIPE, PN20 ELBOW				
8.	1/2"	PC		30
9.	3/4"	PC		30
10.	1"	PC		30
11.	1 1/2"	PC		30
12.	2"	PC		30
13.	2 1/2"	PC		20
14.	3"	PC		10
PPR TEE, PN20				
15.	1/2"	PC		30
16.	3/4"	PC		30

17.	1"	PC		30
18.	1 ½"	PC		30
19.	2"	PC		30
20.	2 ½"	PC		30
21.	3"	PC		30
PPR REDUCER, PN20				
22.	¾" X ½"	PC		25
23.	1" X ¾"	PC		25
24.	1 ½" X 1"	PC		25
25.	2" X 1 ½"	PC		25
26.	3" X 2"	PC		25
PPR FEMALE SOCKET, PN20				
27.	½"	PC		25
28.	¾"	PC		25
29.	1"	PC		25
30.	1 ½"	PC		25
31.	2"	PC		25
32.	2 ½"	PC		25
33.	3"	PC		25
PPR UNION FEMALE ADAPTOR, PN20				
34.	½"	PC		20
35.	¾"	PC		20
36.	1"	PC		20
37.	1 ½"	PC		20
38.	2"	PC		20
39.	2 ½"	PC		20
40.	3"	PC		20
PPR BALL VALVE				
41.	½"	PC		20
42.	¾"	PC		20
43.	1"	PC		20
44.	1 ½"	PC		20
45.	2"	PC		20
46.	2 ½"	PC		20
47.	3"	PC		20
PPR MALE THREADED TEE				
48.	½"	PC		20
49.	¾"	PC		20
50.	1"	PC		20
51.	1 ½"	PC		20
52.	2"	PC		20
53.	2 ½"	PC		20
54.	3"	PC		20
PPR UNEQUAL TEE				
55.	20*25*20 (mm)	PC		20
56.	25*20*20 (mm)	PC		20

57.	25*25*20 (mm)	PC		20
58.	25*20*25 (mm)	PC		20
59.	32*20*32 (mm)	PC		20
60.	32*25*32 (mm)	PC		20
61.	50*25*50 (mm)	PC		20
62.	63*32*63 (mm)	PC		20
63.	50*32*50 (mm)	PC		20
64.	63*50*63 (mm)	PC		20
65.	63*25*63 (mm)	PC		20
PPR SOCKETS				
66.	½"	PC		20
67.	¾"	PC		20
68.	1"	PC		20
69.	1 ½"	PC		20
70.	2"	PC		20
71.	2 ½"	PC		20
72.	3"	PC		20
PPR UNION				
73.	½"	PC		20
74.	¾"	PC		20
75.	1"	PC		20
76.	1 ½"	PC		20
77.	2"	PC		20
78.	2 ½"	PC		20
79.	3"	PC		20
PPR MALE ADAPTOR				
80.	½"	PC		20
81.	¾"	PC		20
82.	1"	PC		20
83.	1 ½"	PC		20
84.	2"	PC		20
85.	2 ½"	PC		20
86.	3"	PC		20
PPR END CAP				
87.	½"	PC		20
88.	¾"	PC		20
89.	1"	PC		20
90.	1 ½"	PC		20
91.	2"	PC		20
92.	2 ½"	PC		20
93.	3"	PC		20
PPR FEMALE ADAPTOR				
94.	½"	PC		20
95.	¾"	PC		20
96.	1"	PC		20

97.	1 ½"	PC		20
98.	2"	PC		20
99.	2 ½"	PC		20
100	3"	PC		20
PPR FEMALE THREADED TEE				
101	½"	PC		20
102	¾"	PC		20
103	1"	PC		20
104	1 ½"	PC		20
105	2"	PC		20
106	2 ½"	PC		20
107	3"	PC		20
PPR UNION MALE ADAPTOR, PN20				
108	½"	PC		20
109	¾"	PC		20
110	1"	PC		20
111	1 ½"	PC		20
112	2"	PC		20
113	2 ½"	PC		20
114	3"	PC		20
PPR THREADED PLUG, PN20				
115	½"	PC		20
116	¾"	PC		20
117	1"	PC		20
118	1 ½"	PC		20
119	2"	PC		20
120	2 ½"	PC		20
121	3"	PC		20
PPR SHORT BEND, PN20				
122	½"	PC		20
123	¾"	PC		20
124	1"	PC		20
125	1 ½"	PC		20
126	2"	PC		20
127	2 ½"	PC		20
128	3"	PC		20

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17. HDPE PIPES AND FITTINGS

The material from which the couplings and adapters are made shall be in accordance with ISO 4427-1. All fittings shall be manufactured using black, bimodal, high-density polyethylene MRS 10.0 material (PE100).

<u>N</u> <u>O</u>	<u>ITEM (Dimensions in inches or mm,</u> <u>depending on source)</u>	<u>UO</u> <u>M</u>	<u>UNIT</u> <u>PRICE</u>	Estimated Annual consumption
HDPE PIPE, PN16				
1	½"	m		50
2	¾"	m		50
3	1"	m		50
4	1 ½"	m		50
5	2"	m		50
6	2 ½"	m		50
7	3"	m		50
HDPE COMPRESSION FITTING, ELBOW 90°, PN16				
8	½"	pc		10
9	¾"	pc		10
10	1"	pc		10
11	1 ½"	pc		10
12	2"	pc		10
13	2 ½"	pc		10
14	3"	pc		10

HDPE COMPRESSION FITTING, TEE, PN16				
15	½"	pc		10
16	¾"	pc		10
17	1"	pc		10
18	1 ½"	pc		10
19	2"	pc		10
20	2 ½"	pc		10
21	3"	pc		10
HDPE COMPRESSION FITTING, REDUCER, PN16				
22	¾" X ½"	pc		10
23	1" X ¾"	pc		10
24	1 ½" X 1"	pc		10
25	2" X 1 ½"	pc		10
26	3" X 2"	pc		10
HDPE FEMALE ADAPTOR, PN16				
27	20 x ½"	pc		10
28	25 x ¾"	pc		10
29	32 x 1"	pc		10
30	40 x 1 1/4"			10
31	50 x 1 ½"	pc		10
32	63 x 2"	pc		10
33	75 x 2 ½"	pc		10
34	90 x 3"	pc		10
HDPE COMPRESSION FITTING, COUPLER				
35	½"	pc		10
36	¾"	pc		10
37	1"	pc		10
38	1 ½"	pc		10
39	2"	pc		10
40	2 ½"	pc		10
41	3"	pc		10
HDPE BALL VALVE, QUARTER TURN, COMPRESSION FITTINGS				

42	½"	pc		10
43	¾"	pc		10
44	1"	pc		10
45	1 ½"	pc		10
46	2"	pc		10
47	2 ½"	pc		10
48	3"	pc		10
<u>HDPE UNION, MALE & FEMALE THREADS</u>				
49	½"	pc		10
50	¾"	pc		10
51	1"	pc		10
52	1 ½"	pc		10
53	2"	pc		10
54	2 ½"	pc		10
55	3"	pc		10
<u>HDPE MALE ADAPTOR</u>				
56	20 x ½"	pc		10
57	25 x ¾"	pc		10
58	32 x 1"	pc		10
59	40 x 1 1/4"	pc		10
60	50 x 1 ½"	pc		10
61	63 x 2"	pc		10
62	75 x 2 ½"	pc		10
63	90 x 3"	pc		10
<u>HDPE END CAP, BUTT FUSION</u>				
64	½"	pc		10
65	¾"	pc		10
66	1"	pc		10
67	1 ½"	pc		10
68	2"	pc		10
69	2 ½"	pc		10
70	3"	pc		10

HDPE BEND, BUTT FUSION, SEAMLESS				
71	½"	pc		10
72	¾"	pc		10
73	1"	pc		10
74	1 ½"	pc		10
75	2"	pc		10
76	2 ½"	pc		10
77	3"	pc		10
HDPE SADDLE CLAMPS ,PN16				
78	50mm x 3/4"	pc		10
79	50mm x 1"	pc		10
80	63mm x 3/4"	pc		10
81	63mm x 1"	pc		10
82	63mm x 1-1/2"	pc		10
83	75mm x 1-1/2"	pc		10
84	90mm x 1/2"	pc		10
85	90mm x 3/4"	pc		10
86	90mm x 1"	pc		10
87	90mm x 1-1/2"	pc		10
88	90mm x 2"	pc		10
89	110mm x 3/4"	pc		10
90	110mm x 1"	pc		10
91	110mm x 1-1/2"	pc		10
92	110mm x 2"	pc		10

TENDERER'S NAME: _____

TENDERER'S SIGNATURE _____

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18. STAINLESS STEEL 316L SEAMLESS PIPES AND FITTINGS

NO	ITEM PPR PIPE	UOM	UNIT PRICE	Estimated Annual consumption
1.	Pipe 2 inch, Sch.10 SS316L	m		20
2.	Pipe 4 inch, Sch.10 SS316L	m		20
3.	Pipe 6 inch, Sch.10 SS316L	m		20
4.	Pipe 8 inch, Sch.10 SS316L	m		20
5.	Pipe 10 inch, Sch.10 SS316L	m		20
6.	Pipe 12 inch, Sch.10 SS316L	m		20
7.	Pipe 14 inch, Sch.10 SS316L	m		20
8.	Pipe 16 inch, Sch.10 SS316L	m		20
9.	Reducer 16 to 14 inch, Sch.10 SS316L	pc		5
10.	Reducer 14 to 12 inch, Sch.10 SS316L	pc		5
11.	Reducer 12 to 10 inch, Sch.10 SS316L	pc		5
12.	Reducer 10 to 8 inch, Sch.10 SS316L	pc		5
13.	Reducer 8 to 6 inch, Sch.10 SS316L	pc		5
14.	Reducer 6 to 4 inch, Sch.10 SS316L	pc		5
15.	Bend 2 inch, Sch.10 SS316L	pc		5

16.	Bend 4 inch, Sch.10 SS316L (137783)	pc		5
17.	90 Deg Bend 6 inch, Sch.10 SS316L	pc		5
18.	90 Deg Bend 8 inch, Sch.10 SS316L	pc		5
19.	90 Deg Bend 10 inch, Sch.10 SS316L	pc		5

TENDERER'S NAME: _____

TENDERER'S SIGNATURE _____

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SCHEDULE 2: SUPPLY OF WORKSHOP TOOLS AND ACCESSORIES

1. HAND TAPS HIGH SPEED STEEL (HSS) + COBALT 5% - SET TO INCLUDE FIRST, SECOND AND PLUG

No	Description	UOM	Unit Price Excl. VAT	Total Price Excl. VAT	Estimated Annual consumption
1	M6*1.0 mm	SET			5
2	M8*1.25mm	SET			5
3	M10*1.25mm	SET			5
4	M10*1.5mm	SET			5
5	M12*1.75mm	SET			5
6	M12*1.5mm	SET			5
7	M14*1.75mm	SET			5
8	M14*1.5mm	SET			5
9	M16*2.0mm	SET			5
10	M16*2.5mm	SET			5
11	M18*2.0mm	SET			5
12	M18*2.5mm	SET			5
13	M20*2.0mm	SET			5
14	M20*2.5mm	SET			5
15	M22*2.0mm	SET			5

16	M22*2.5mm	SET			5
17	M24*2.0mm	SET			5
18	M24*2.5mm	SET			5
19	M27*3.0mm	SET			5
20	M30*1.5mm	SET			5
21	M30*3.5mm	SET			5
22	M30*2.0mm	SET			5
	SUB TOTAL				
	16%VAT				
	GRAND TOTAL				

TENDERER'S NAME: _____

TENDERER'S SIGNATURE _____

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2. SPLIT DIES & DIE NUTS –

SPLIT DIES - Titanium-nitride (TiN) coated high-speed steel, Straight Flute Split Dies, Right Hand Thread, and conforming to ISO529.

No	Description	UOM	Unit Price Excl. VAT	Total Price Excl. VAT	Estimated Annual consumption
1	M6*1mm	SET			5
2	M8*1.25	SET			5
3	M10*1.25mm	SET			5
4	M12*1.5mm	SET			5
5	M12*1.75mm	SET			5
6	M14*1.5mm	SET			5
7	M14*1.75mm	SET			5
8	M16*2.0mm	SET			5
9	M16*2.5mm	SET			5
10	M18*2.0mm	SET			5
11	M18*2.5mm	SET			5
12	M20*2.0mm	SET			5
13	M20*2.5mm	SET			5
14	M22*2.0mm	SET			5
15	M22*2.5mm	SET			5
16	M24*2.0mm	SET			5
17	M24*2.5mm	SET			5

18	M27*3.0mm	SET			5
19	M30*1.5mm	SET			5
20	M30*2.0mm	SET			5
21	M30*3.5mm	SET			5
DIE NUTS					
22	M10*1.25mm	pc			5
23	M10*1.5mm	pc			5
24	M12*1.75mm	pc			5
25	M12*1.5mm	pc			5
26	M14*1.5mm	pc			5
27	M14*1.75mm	pc			5
28	M16*2.0mm	pc			5
29	M16*2.5mm	pc			5
30	M18*2.0mm	pc			5
31	M18*2.5mm	pc			5
32	M20*2.0mm	pc			5
33	M20*2.5mm	pc			5
34	M22*2.0mm	pc			5
35	M22*2.5mm	pc			5
36	M24*2.0mm	pc			5

37	M24*2.5mm	pc			5
	SUBTOTAL				
	16%VAT				
	GRAND TOTAL				

TENDERER'S NAME: _____

TENDERER'S SIGNATURE _____

DATE _____

3. LATHE CUTTING TOOLS, SHAPING TOOLS, MILLING MACHINE, BORING MACHINE TOOLS

LATHE CUTTING TOOLS

No	Description	UOM	Unit Price Excl. VAT	Total Price Excl. VAT	Estimated Annual consumption
1.	Centre drills-5PC premium HSS center drill set 60degree combined countersunk.	SET			10
2.	MWL R/L 2525 M08 Tool holder	PC			10
3.	12mmX12mmX200mm HSS + Cobalt 5% lathe shaped turning tools	PC			10
	10mmX10mmX100mm HSS + Cobalt 5% lathe shaped turning tools	PC			10
	8mmX8mmX100mm HSS + Cobalt 5%	PC			10

	lathe shaped turning tools-				
4.	Left Hand Turning Carbide Tool, brazed tip, 16mm x 16mm by 100mm length	PC			30
5.	External thread cutting tool “As Sandvik Coromant QS™ shanks or approved equivalent” size 12mm x 12mm	PC			5
6.	External thread cutting tool “As Sandvik Coromant QS™ shanks or approved equivalent” size 16mm x 16mm	PC			5
7.	External thread cutting tool “As Sandvik Coromant QS™ shanks or approved equivalent” size 20mm x 20mm	PC			5
8.	Internal thread cutting tool “As Sandvik Coromant Boring Bar, Series: CoroThread 266, Internal, Right, 1 in Shank Width, 1 in Shank Height, 12 in Overall Length, Insert Compatibility: 266.RL-16., 1.14 in Head Length, ANSI Code: 266RKF-D16-3-R, 3 in Depth of Cut, 266R/LKF-R Tool Holder, 0.669 in Center to Cutting Edge, Screw/Rail Bottom Insert Holding Method, Yes. To include 5762657 Right Hand Shim, 5762934 Shim Screw, 5763175 Screw and 5764102 Key” or approved equivalent.	PC			5
9.	External thread cutting tool carbide inserts, to fit items 5,6,7. Each tool to be supplied with 10 assorted inserts, making a SET of not less than 40 inserts	SET			2
10.	Internal thread cutting tool carbide inserts, to fit items 8 above. Supply is 10 assorted inserts.	SET			2
11.	T-Type Cut-Off Blades, Cobalt HSS, “As Somma TBL832C ” or approved equivalent	PC			5

	T-Type Cut-Off Blades, Cobalt HSS, “As Somma TBL644C ” or approved equivalent	PC			5
12.	T-Type Cut-Off Blades, Cobalt HSS, “As Somma TBL1244C ” or approved equivalent	PC			5
13.	T-Type Cut-Off Blade Holder, to be used on universal tool post, to hold blade , “As Somma TBL832C ” or approved equivalent	PC			1
14.	T-Type Cut-Off Blade Holder, to be used on universal tool post, to hold blade , “As Somma TBL644C ” or approved equivalent	PC			1
15.	T-Type Cut-Off Blade Holder, to be used on universal tool post, to hold blade , “As Somma TBL1244C ” or approved equivalent	PC			1
	<u>MILLING MACHINE TOOLS</u>				
16	Tungsten carbide end mill cutters (6mm 2 flute, 10mm 2 flute, 12mm 2 flute, 16mm 2 flute, 20mm 2 flute 6mm 3 flute, 10mm 3 flute, 12mm 3 flute, 16mm 3 flute, 20mm 3 flute) stored in fitted plastic case). A set should be a minimum of 10 cutters	SET			3
17	HSS + 5% cobalt end mill cutters (6mm 2 flute, 10mm 2 flute, 12mm 2 flute, 16mm 2 flute, 20mm 2 flute 6mm 3 flute, 10mm 3 flute, 12mm 3 flute, 16mm 3 flute, 20mm 3 flute) stored in fitted plastic case). A set should be a minimum of 10 cutters	SET			3
	<u>BORING MACHINE TOOLS</u>				
18	Boring bar- MICRO 100 Carbide Boring Bar 0.290” Bore x 1.350” Depth BB-	PC			5

	2901350S				
19	Right hand turning carbide tool	PC			5
20	Revolving center- Stainless Steel Straight Shank Revolving Center, Size: 4mm	PC			2
21	Dead centre- Heavy Carbide Tipped Dead Center material- finished alloy steel, Grade- 20MNCr5	PC			2
22	BRAZED CARBIDE TIPS Type B20 (L =20, t =12, S =7, r =7)	PC			20
23	BRAZED CARBIDE TIPS Type C105 (L =20, t =8, S =5, re =0.5, e =0.8)	PC			20
24	BRAZED CARBIDE TIPS Type A16 (L =16, t =10, S =6, r =6)	PC			20
25	BRAZED CARBIDE TIPS Type E10 (L =10, t =18, S =6,)	PC			20
26	S-50-U-M-T-L-P-R-16 spare carbide inserts	PC			20
27	LATHE BORING BARS S-20-U-M-T-L-P-R-16	pc			5
28	LATHE BORING BARS S-25-U-M-T-L-P-R-16	pc			5
29	LATHE BORING BARS S-32-U-M-T-L-P-R-16	pc			5
	LATHE BORING BARS S-50-U-M-T-L-P-R-16	pc			5
30	S-32-U-M-T-L-P-R-16 spare carbide inserts	pc			20

31	S-25-U-M-T-L-P-R-16 spare carbide inserts	pc			20
32	S-20-U-M-T-L-P-R-16 spare carbide inserts	pc			20
	SUBTOTAL				
	16%VAT				
	GRAND TOTAL				

TENDERER'S NAME: _____

TENDERER'S SIGNATURE _____

DATE _____

4. OLKARIA WORKSHOP TOOLS AND ACCESSORIES

As per specifications outlined in Section V - Schedule of requirements

No	Description	UOM	Unit Price Excl. VAT	Total Price Excl. VAT	Estimated Annual consumption
1.	HOLE SAW KIT 28-PC	SET			2
2.	BRAZED CARBIDE TIPS Type B20 (L =20, t =12, S =7, r =7)	PC			20
3.	BRAZED CARBIDE TIPS Type C105 (L =20, t =8, S =5, re =0.5, e =0.8)	PC			20

4.	BRAZED CARBIDE TIPS Type A16 (L =16, t =10, S =6, r =6)	PC			20
5.	BRAZED CARBIDE TIPS Type E10 (L =10, t =18, S =6,)	PC			20
6.	SILVER BRAZING ALLOY ROD	KG			5
7.	SILVER BRAZING ALLOY STRIP	KG			2
8.	LATHE BORING BARS S-50- U-M-T-L-P-R- 16	PC			5
9.	LATHE BORING BARS S-32- U-M-T-L-P-R- 16	PC			5
10.	LATHE BORING BARS S-25- U-M-T-L-P-R- 16	PC			5
11.	LATHE BORING BARS S-20- U-M-T-L-P-R- 16	PC			5
12.	S-50-U-M-T-L-P-R-16 spare carbide inserts	PC			20
13.	S-32-U-M-T-L-P-R-16 spare carbide inserts	PC			20
14.	S-25-U-M-T-L-P-R-16 spare carbide inserts	PC			20
15.	S-20-U-M-T-L-P-R-16 spare carbide inserts	PC			20
16.	CNMG TOOL HOLDER, TURNING AND FACING, RIGHT HAND.	SET			2

	FOR ISO INSERT TYPE: CNMG120408RP FOR 20mm x 20mm shank				
17.	CNMG TOOL HOLDER, TURNING AND FACING, RIGHT HAND. FOR ISO INSERT TYPE: CNMG120408RP FOR 25mm x 25mm shank	SET			2
18.	CNMG 120408E CARBIDE TURNING INSERTS For 20mmX20mm Shank.	PC			50
19.	CNMG 120408E CARBIDE TURNING INSERTS For 25mmX25mm Shank.	PC			25
20.	BENCH GRINDING STONES 250mm Outside diameter, X 30mm Thick, X 20mm bore	PC			6
21.	MULTIPLE POINT REVOLVING CENTER	SET			3
22.	FACE MILLING CUTTER 45° 160x40mm FOR 8 INDEXABLE INSERTS	PC			2
23.	INSERTS FOR FACE MILLING CUTTER 45° 160x40mm, type SE.T 1204	PC			100
24.	TUNGSTEN CARBIDE BURR KIT	SET			4
25.	METAL CUTTING DISCS, Thin INOX Disc 100mm x 1mm x 22mm	PC			50
26.	DRILL BITS, HSS + 5% Cobalt. 25PC METRIC BITS - The set should include 25pcs of cobalt steel twist drill bits: 1mm, 1.5mm, 2mm, 2.5mm, 3mm, 3.5mm, 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 6.5mm, 7mm, 7.5mm, 8mm, 8.5mm, 9mm, 9.5mm, 10mm, 10.5mm, 11mm, 11.5mm, 12mm, 12.5mm, 13mm. Should be supplied in a well-	SET			3

	organized metal indexed storage case.				
27.	Carbide Drill Bits, Coating nACo, 2 flute, Helix 25°, Cut Materials group: PMKS. A set of drill bits to comprise the following sizes: 1.5mm, 2mm, 2.5mm, 3mm, 3.5mm, 4mm, 4.5mm, 5mm and 6mm	SET			8
28.	Carbide Drill Bits, Coating nACo, 2 flute, Helix 25°, Cut Materials group: PMKS. A set of drill bits to comprise the following sizes: 6.5mm, 7mm, 7.5mm, 8mm, 8.5mm, 9mm, 9.5mm and 10mm	SET			6
29.	Carbide Drill Bits, Coating nACo, 2 flute, Helix 25°, Cut Materials group: PMKS. A set of drill bits to comprise the following sizes: 10.5mm, 11mm, 11.5mm, 12mm, and 12.5mm	SET			4
30.	Carbide Drill Bits, Coating nACo, 2 flute, Helix 25°, Cut Materials group: PMKS. A set of drill bits to comprise the following sizes: 13mm, 13.5mm, 14mm, 15mm and 16mm	SET			3
	SUBTOTAL				
	16%VAT				
	GRAND TOTAL				

TENDERER'S NAME: _____

TENDERER'S SIGNATURE _____

DATE _____

2. REVISED SECTION V - SCHEDULE OF REQUIREMENTS

ENGINEERING MATERIALS AND WORKSHOP TOOLS

A. ENGINEERING MATERIALS SPECIFICATIONS

1. Stainless Steel Grade 304

For general purpose uses requiring corrosion and oxidation resistance.

Chemical composition of additives (%)

C	Mn	S	Si	Cr	Ni
0.08 Max	2.0	0.03	1.0	18.0 to 20.0	8.0 to 10.5

Mechanical Properties at Room Temperature in the annealed condition

	Typical	Minimum
Tensile Strength	600 MPa	515 Mpa
Proof Stress (Offset 0.2%)	310 MPa	205 Mpa
Elongation (% in 50mm)	60	40
Hardness (Brinell)	170	-
Endurance (fatigue) limit	240 MPa	-

2. Stainless Steel Grade 316

For special purpose uses requiring improved corrosion and resistance in many aggressive environments. ASTM A240

Chemical composition of additives (%)

C	Mn	P	S	Si	Cr	Ni	Mo
0.08 Max	2.0	0.045	0.03	1.0	16.0	10.0	2.00

Mechanical Properties at Room Temperature

	Typical	Minimum
Tensile Strength	570-600 MPa	515-485 Mpa
Proof Stress (Offset 0.2%)	320-300 MPa	205 Mpa
Elongation (% in L=5.65So)	60-50	40
Hardness (Brinell)	165	-
Endurance (fatigue) limit	260 MPa	-

3. Special Steel

(a) En8

BS 970 of 1955, CK40, CK45.

For special general purpose steel works requiring better mechanical properties than mild steel.

Chemical composition of additives (%)

C	Si	Mn	S	Ph
0.36-0.44	0.10-0.40	0.60-1.00	0.05 max	0.05 max

Mechanical Properties at Room Temperature (Minimum)

	Typical
Tensile Strength	660 MPa
Yield Stress	530 MPa
Proof Stress	495

(b) En9

BS 970 of 1955, AISI 1055.

For special general purpose steel works requiring better mechanical properties than mild steel.

Chemical composition of additives (%)

C	Si	Mn	S	Ph
0.50-0.60	0.10-0.40	0.50-0.90	0.05 max	0.05 max

Mechanical Properties at Room Temperature (Minimum)

	Typical
Tensile Strength	850 MPa
Yield Stress	415 MPa
Proof Stress	385

(c) En19

BS 970 of 1955, AISI 4140.

For high tensile works with good durability and shock resistance and improved hardness.

Chemical composition of additives (%)

C	Si	Mn	Cr	Mo	S	P
0.36-0.44	0.10-0.35	0.70-1.00	0.90-1.20	0.25-0.35	0.035 max	0.040 max

Mechanical Properties at Room Temperature (Minimum)

	Typical
Tensile Strength	1000 MPa
Yield Stress	555 MPa
Proof Stress	570

(d) En24

BS 970 of 1955, AISI 4340.

For specialized steel works requiring superior strength, shock resistance, ductility and resistance to wear.

Chemical composition of additives (%)

C	Si	Mn	Cr	Mo	S	P
0.36-0.44	0.10-0.35	0.45-0.70	1.00-1.40	0.20-0.35	0.035 max	0.040 max

Mechanical Properties at Room Temperature (Minimum)

	Typical
Tensile Strength	1150 MPa
Yield Stress	850 MPa
Proof Stress	835

4. Mild Steel

BS 970 of 1955, AISI 1020

For general purpose steel works.

Chemical composition of additives (%)

C	Si	Mn	S	Ph
0.16-0.24	0.10-0.40	0.50-0.90	0.05 max	0.05 max

Mechanical Properties at Room Temperature (Minimum)

	Typical
Tensile Strength	430 MPa
Yield Stress	260 MPa

5. GI Pipes

GI class B for medium to high pressure applications

6. Seamless Pipes

ASTM A106 Grade B

For special purpose high pressure piping and fabrication works.

Chemical composition of additives (%)

C	Mn	P	S	Si	Cr	Mo	Ni
0.30max	0.29-1.06	0.05	0.06 max	0.10Max	0.40	0.15	0.40

Schedule 40, 80 and 160- Pressure/ Temperature Rating

Temp. °C	-29 to 343	371	399	413
Allowable Stress MPa	103	99	89	82

7. Bronze

Chemical composition (%)

- Tin- 4-6%
- Zinc- 4-6%
- Lead- 4-6%
- Copper- Balance

Mechanical Properties

- Ultimate Tensile Stress- 250MPa
- Elongation- 13%
- Hardness HB- 65

8. Phosphor Bronze

Chemical composition (%)

- Tin- 8-10%
- Phosphorus- 0.5% min
- Copper- Balance

Mechanical Properties

- Ultimate Tensile Stress- 250 - 350MPa
- Elongation- 2-5%
- Hardness HB- 60-85

9. Aluminum Bronze

Chemical composition (%)

- Aluminum- 8.5-10.5%
- Iron- 3.5-5.5% min
- Nickel- 4.5-6.5
- Copper- Balance

Mechanical Properties

- Tensile Strength- 72.4 Kg/mm²
- Elongation- 15-20%

- Hardness HB- 230-280

10. Copper

Chemical composition (%)

- Copper- 99.99

11. White Metal compounds

1. White metal ASTM B23

A tin base alloy used as a lining for bearing shells of cast iron, steel, and bronze. The alloys lining prevents friction and wear that is common when a lubricant is not able to prevent the bearing's moving parts from welding together.

Tin based Babbitt metal Grade 2

Chemical composition (%)

- Tin 88-90.0%
 - Antimony 7.00-8.00%
 - Lead 0.35% max
 - Copper 3.0-4.0%
- ### 2. Tinning powder

A dry mixture of pure powdered Tin and flux specifically designed for pre-tinning Cast Iron, Steel, Bronze, and Copper bearing shells.

No	Parameter	Requirement
1	Appearance	Light, silvery gray powder
2	Solubility in water	About 50% soluble in water
3	Smell	No distinctive smell
4	Density	Around 5 g/cm ³
5	Volatility	0% volatile
6	pH (in 10% aqueous solution)	1.5

3. Tinning sticks

Pure solder alloy of tin for tinning steel surfaces before application of white metal lining

No	Parameter	Requirement
1	Solder Alloy Composition	100 Sn (weight %)
2	Melting Temperature	Around 232° C

12. Brass

Chemical composition (%)

- Copper- 58-62%
- Lead- 1-3%
- Zinc- 37-42%

13. Aluminum

ENG.7075 Zinc based Aluminum

Chemical composition (%)

- Silicon- 0.40%
- Iron- 0.5%
- Copper- 1.2-2.0%
- Zinc- 5.1-6.1%
- Manganese- 0.3%
- Chromium-0.18-0.28
- Others- 0.3%
- Aluminum- The rest

14. Teflon

White PTFE with Graphite, Carbon, Bronze or Glass fiber filler

Mechanical Properties

- Density- 2.1-2.2 gm/cc
- Tensile strength-210-375 kgf/cm²
- Compressive strength- 40-50kgf/cm²

15. Thordon

Grade SXL

Low coefficient of friction (typically 0.10-0.20)

High dry PV (Pressure Velocity) rating

High resistance to abrasion in wet applications; good abrasion resistance operating dry

Dry start-up capability

High resistance to shock loading and vibration

16. Cold Work Tool Steel

Grade;

BS 970 D2, DIN X155CrVMo121, AISI D2, Werkstoff No. 1.2379

B. OLKARIA WORKSHOP TOOLS & ACCESSORIES

1. HOLE SAW KIT 28-PC

Features a new 3.5 TPI tooth design with thermoset coating allowing faster cutting.

Kit also includes a case

Features

- Ice Hardened cryogenically treated for up to 50% longer life
- Optimized tooth form for up to 2X faster cutting
- Wide, angled & offset slots for easy plug access

- Bi-metal construction with 8% cobalt for increased wear resistance

Includes

- 3/4" Bi-Metal Hole Saw
- 7/8" Bi-Metal Hole Saw
- 1" Bi-Metal Hole Saw
- (1) 1-1/8" Bi-Metal Hole Saw
- (1) 1 1/4" Bi-Metal Hole Saw
- (1) 1-3/8" Bi-Metal Hole Saw
- (1) 1-1/2" Bi-Metal Hole Saw
- (1) 1-3/4" Bi-Metal Hole Saw
- 2" Bi-Metal Hole Saw
- (1) 2-1/8" Bi-Metal Hole Saw
- (1) 2-1/4" Bi-Metal Hole Saw
- (1) 2-1/2" Bi-Metal Hole Saw
- (1) 2 5/8 in Hole Dozer Bi-Metal Hole Saw
- 3" Bi-Metal Hole Saw
- (1) 3 1-4 in Hole Dozer Bi-Metal Hole Saw
- (1) 3 3-8 in Hole Dozer Bi-Metal Hole Saw
- (1) 3 5/8" Hole Dozer Bi-Metal Hole Saw
- (1) 3 3-4 in Hole Dozer Bi-Metal Hole Saw
- (1) 4 1/8" Hole Dozer Bi-Metal Hole Saw
- (1) 4 1/4" Hole Dozer Bi-Metal Hole Saw
- (1) 4 1/2" in Hole Dozer Bi-Metal Hole Saw
- (1) 4 3-4 in Hole Dozer Bi-Metal Hole Saw
- 3/8" Hex Shank Arbor
- (1) 7 16 Hex Shank Arbor
- 7/16" No wobble Arbor
- (3) 3-1/2" Pilot Bit
- 1/8" Hex Key

2. BRAZED CARBIDE TIPS

Recognition application: For semi finishing of cast iron, Non-ferrous metals and their alloys, and non-metallic materials at medium cutting speeds.

Features

- Density g/cm² : 14.5-14.9
- Min bending strength N/cm² : 2580
- Min hardness HEA : 89.5
 - Type B20 (L =20, t =12, S =7, r =7)
 - Type C105 (L =20, t =8, S =5, re =0.5, e =0.8)
 - Type A16 (20pcs) (L =16, t =10, S =6, r =6)
 - Type E10 (20pcs) (L =10, t =18, S =6,)

3. SILVER BRAZING ALLOY ROD

Brazing Alloys for Tungsten Carbide Tipped Tools in various compositions suitable for different applications, with addition of nickel and manganese improving wettability on tungsten and molybdenum materials.

Silver 49A (MnNi): Ag-49, Cu-27.5, Zn-20.5, Mn2.5, Ni-0.5

Melt point 670 °C, Flow point 690 °C, Brazing range 690 °C, Specific gravity 8.9.

Standard size for Round Rod: Diameter 1.5mm X Length 500mm

Quantity required (5 Kgs)

4. SILVER BRAZING ALLOY STRIP

Brazing Alloys for Tungsten Carbide Tipped Tools in various compositions suitable for different applications, with addition of nickel and manganese improving wettability on tungsten and molybdenum materials.

Silver 49A (MnNi): Ag-49, Cu-27.5, Zn-20.5, Mn-2.5, Ni-0.5

Melt point 670 °C, Flow point 690 °C, Brazing range 690 °C, Specific gravity 8.9.

Size for strip: 0.5mm thick X 12mm width

Quantity required (2 Kgs)

5. LATHE BORING BARS

Boring Bars as per ANSI Designation Chart

S-50-U-M-T-L-P-R-16 ---- 2pcs each, with 30pcs spare carbide inserts

S-32-S-M-T-L-P-R-16 ----- 2pcs each, with 30pcs spare carbide inserts

S-25-R-M-T-L-P-R-16 ---- 2pcs each, with 30pcs spare carbide inserts

S-20-R-M-T-L-P-R-16 ---- 2pcs each, with 30pcs spare carbide inserts

Each boring bar to have spare locking accessories,
which include:

4pcs of clamp screw each,

8pcs of carbide shims each,

shim pins,

allen key and cartridge spare where applicable.

6. CNMG TOOL HOLDER, TURNING AND FACING, RIGHT HAND.

PCLNR/L 95° CNMG

RIGHT HAND Turning.

Lever clamp system for rigidity

95° for use with CNMG/CNMA Inserts

Turning and Facing.

DCLNR 95° CNMG, TOOL HOLDER – TURNING AND FACING - CLNR 95° CNMG

Description

DCLNR Turning Toolholder

Top clamp system for rigidity

95° For use with CNMG/CNMA Inserts

Turning and Facing

Used for Heavy Duty Turning

Dimensions of shank:

1) 20x20x125mm long

With 30pcs spare For use with: carbide inserts: ([CNMG-VL](#))

Double-Sided 80° Rhombic Inserts with a Chip former for High Temperature Alloys and Stainless), and 20pcs Carbide inserts: ([CNMA](#)) Double-Sided 80° Rhombic Inserts for Short Chipping Materials such as Cast Iron.

2) 25x25x150mm long

With 30pcs spare For use with:

Carbide inserts: ([CNMG-VL](#)) Double-Sided 80° Rhombic Inserts with a Chip former for High Temperature Alloys and Stainless), and

20pcs Carbide inserts: ([CNMA](#)) Double-Sided 80° Rhombic Inserts for Short Chipping Materials such as Cast Iron.

Both items to have a **set of 5** spare clamp screw, carbide shims, shim pins, allen key and cartridge spare where applicable.

N/B Carbide inserts package to have manufacturer's instructions about the cutting conditions.

7. BENCH GRINDING STONES

Bench grinding stone

Green Silicon Carbide (Grit 300)

Size: 250mm Outside diameter, X 30mm Thick, X 20mm bore.

8. MULTIPLE POINT REVOLVING CENTER

3MT TAPER, Multiple Point Revolving Center

High Precision Lathe Multiple Point 7 Tips Revolving Live Center MT3 Shank.

Comes with 7 different tips-

5 live centers,

1 Female Center,

1 Pipe Center Tip

With an ejecting key.

Have 3 Bearings made of hardened & ground steel.

The tips are induction hardened

9. FACE MILLING CUTTER

FACE MILLING CUTTER 45° 160x40mm FOR 8 INDEXABLE INSERTS

Description

45° face milling cutter

For ISO milling inserts, type SE.T 1204

Highly positive rake angle

Easy-action, low-noise milling

Large insert thickness

For plunge milling and face milling

Up to Ø 160 mm.

Supplied with clamping screws and wrench

Can be used on machines with low drive power and in unstable conditions

Cutting angle: Tool cutting edge angle 45°, axial rake angle 20°, radial rake angle -10°

Complete with:

- ISO NT40 arbor (M16 draw bar threads)
- ISO milling inserts, type SE.T 1204
-

10. TUNGSTEN CARBIDE BURR KIT

KIT COMPRISES THE FOLLOWING:

Diameter **6mm** shank applies to all types.

DOUBLE CUT FLUTING STYLE.

- 1) A = Cylinder without End Cut
 - a. Head-Ø 10mm,
 - b. Head length 19mm
 - c. Overall length 60mm

- 2) C = Cylindrical ball nose
 - a. Head-Ø 10mm,
 - b. Head length 20mm
 - c. Overall length 60mm

- 3) D = Spherical (Ball)
 - a. Head-Ø 10mm,
 - b. Head length 9mm
 - c. Overall length 49mm

- 4) E = Oval
 - a. Head-Ø 10mm,
 - b. Head length 16mm
 - c. Overall length 60mm

- 5) F = Arch round nose (Ball nose tree)
 - a. Head-Ø 10mm,
 - b. Head length 19mm
 - c. Overall length 63mm

- 6) G = Arch pointed nose (Pointed tree)

- a. Head-Ø 10mm,
- b. Head length 20mm
- c. Overall length 60mm

7) H = Flame shape

- a. Head-Ø 12mm,
- b. Head length 32mm
- c. Overall length 76mm

8) M = 60° cone

- a. Head-Ø 12mm,
- b. Head length 11mm
- c. Overall length 58mm

9) N = Inverted cone

- a. Head-Ø 10mm,
- b. Head length 10mm
- c. Overall length 53mm

NOTE: ALL ABOVE BURRS ARE 6mm SHANK DIAMETERS.

11. METAL CUTTING DISCS (super and ultra-thin)

- **Product Details**

All abrasive discs are developed, manufactured and safety-tested in accordance with the European standard EN 12413 - safety requirements for bonded abrasive products.

Cutting discs can be used in many applications and highly recommended for steel, construction steel, low-alloy steel, non-ferrous, titanium.

Recommended for high-alloy steel, thin sheets, plates, profiles, stainless steel and inox.

- Free from iron, sulphur and chlorine
- Burr-free cutting
- High disc stability and long life
- Easy and fast cutting
- Manufactured to EN 12413 with oSa accreditation.

Super Thin INOX Disc 100mm x 1mm x 22mm

12. DRILL BITS

Ground in High Speed Steel + 5% Cobalt

Set to be in a case with sizes; 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13 millimeters (metric)

Straight shank bits.

SUPPLIER ACKNOWLEDGEMENT OF ADDENDUM NO. 2

We, the undersigned hereby certify that the addendum is an integral part of the document and the alterations set out in addendum has been incorporated in the Tender document.

Signed.....

Tenderer.....

Date.....