



3	Supply, installation, testing and commissioning of <b>Clamp-on Type/Insertion Type Flow Transmitter</b> for measuring Flow of Rising main with digital indicator including cost of all materials, labour, loading, unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
4	Supply, installation, testing and commissioning <b>Pressure Transmitter with 4-20mA</b> output to connect with SCADA system including cost of all materials, labour, loading, unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
5	Providing necessary Instrumentation <b>Signal Cables</b> (1.5 sq.mm, 2 core) for level transmitters, Pressure Transmitters, Flow meters etc., including cost of all materials, labour, loading, unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Set				
6	Supply of necessary <b>Power Cables</b> (2.5 sq.mm, 3 core) for Pump motors, valves feedbacks & commands including cost of all materials, labour, loading, unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Set				
7	Supply of required <b>JB, cable tray and other accessories</b> including cost of all materials, labour, loading ,unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Set				
8	Supply of necessary field controller, batteries, solar system and Communication Link <b>Radio 2.5 GHz</b> with necessary cables & accessories to communicate with Control Center including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	Set				
9	Design, Supply & Delivery of necessary Communication Link <b>Radio/GPRS 2.5 GHz</b> with necessary cables & accessories to communicate with Control Centre including cost of all materials, labour, loading ,unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Set				

10	Supply and installation of <b>Water Meter</b> at the entry of zone based on the flow requirement including cost of all materials, labour, loading, unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
10.1	Upto 500 m3					
10.2	500 to 1000 m3					
11	Supply of <b>Pressure regulating valves (To regulate the pressure)</b> at the entry of the zones including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	Nos.				
11.1	100 mm					
11.2	200 mm					
11.3	300 mm					
11.4	400 mm					
11.5	500 mm					
12	Supply, installation, testing and commissioning of <b>Pressure regulating valves (To regulate the pressure)</b> at the entry of the zones including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge	Nos.				
12.1	100 mm					
12.2	200 mm					
12.3	300 mm					
12.4	400 mm					
12.5	500 mm					
13	Supply and delivery of <b>Pressure regulating valves</b> (To regulate the pressure) at the entry of the zones including cost of all materials, labour, loading, unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
13.1	100 mm					
13.2	200 mm					
13.3	300 mm					
13.4	400 mm					
13.5	500 mm					
14	Supply and delivery of <b>Solenoid valves</b> for each shifts in 50 Ha chak and in 50 Ha including cost of all materials, labour, loading, unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				

14.1	100 mm					
14.2	200 mm					
15	Supply and delivery of <b>Remote Transfer Unit (RTU)</b> for the control of Solenoid valves remotely from control room for each shifts in 50 Ha Chak and in 50 Ha there are <b>required No. of Shifts</b> including cost of all materials, labour, loading ,unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
16	Supply and delivery of <b>Batteries</b> to operate RTU & Solenoid valves for each shifts in 50 Ha Chak and in 50 Ha chak there are required No. of Shifts, including cost of all materials, labour, loading, unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
17	Supply, installation, testing and commissioning of <b>Solar Panel</b> to charge batteries for each shifts in 50 Ha Chak and in 50 Ha there are required no. of shifts including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	Nos.				
18	Supply of <b>Solar Panel</b> to charge batteries including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	Nos.				
19	Supply and delivery of <b>Solar Panel</b> to charge batteries for each shifts in 50 Ha Chak and in 50 Ha there are required No. of Shifts including cost of all materials, labour, loading, unloading etc., and with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
20	Supply, installation, testing and commissioning of <b>Pressure Gauge 250 GLZ 8 Bar 6.25 mm BSP 2</b> in the inlet and outlet of 50 Ha chak and 2 in the filter. with all lead and lifts etc., complete and as directed by Engineer-in charge.	Nos.				
21	Supply, installation, testing and commissioning of <b>Bermad 2"L Quick Pressure Relief/ eqvilent 13 Q-YP-BSP valve</b> near the filter in 50 Ha Chak with all lead and lifts etc., complete and as directed by Engineer-in charge.	Nos.				

22	Supplying and providing <b>PVC SOLVENT 1L</b> complete with all leads and lifts as directed by Engineer in-charge(Half litre/Ha).	Nos.				
23	Supplying, Installing, testing and commissioning of <b>Fittings and accessories</b> complete with all leads and lifts as directed by Engineer in charge.	Ha				
24	Supply, installation, testing and commissioning of <b>16 mm Drip line 0.4 m*1.0 LPH</b> as per ISO Standards, for every 50 Ha Chak the drip line (Area/Lateral spacing) drip line comes in 500 m reel with all lead and lifts etc., complete and as directed by Engineer in charge.	Rmt				
24.1	Pressure Compensated Drip Line (PC)					
24.2	NonPressure Compensated Drip Line (NPC)					
25	Supply, installation, testing and commissioning of <b>16 mm Rubber Grommer OD DIA 16*12</b> , for every 50 Ha Chak the plain lateral .((Sub main Length/Lateral spacing)*no. of sides) plain lateral comes in 400 m reel. with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
26	Supply, installation, testing and commissioning of <b>16 mm Start Nipple</b> for connecting Plain Lateral, for every 50 Ha Chak the plain lateral ((Sub main Length/Lateral spacing)*no. of sides) with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
27	Supply, installation, testing and commissioning of <b>16 mm X 17 mm coupling connector</b> for connecting Plain Lateral and Drip line, for every 50 Ha Chak the plain lateral. ((Sub main Length/Lateral spacing)*no. of sides) with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
28	Supply, installation, testing and commissioning of <b>16 mm X 17 mm end cap</b> , for every 50 Ha Chak the plain lateral ((Sub main Length/Lateral spacing)*no. of sides) with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				

29	Supply, installation, testing and commissioning of <b>17 mm Connector</b> for connecting drip line, for every 50 Ha chak the plain lateral . (Drip line/500) drip line comes in 500 mm reels with all lead and lifts etc., complete and as directed by Engineer-in charge	Nos.				
30	Supplying, Installing, testing and commissioning of <b>Filtomat auto filter battery</b> completer assembly (500m3/hr.), complete with all leads and lifts as directed by Engineer in charge	Nos.				
31	Supplying, Installing, testing and commissioning of <b>Butterfly Valve Lever Operated 6 "1 at inlet, 1 at outlet 1</b> in between the manifold of 1 filter confirming to IS 513905 of specified diameter, cost of all jointing materials, machinery, labour etc., complete with all leads and lifts as directed by Engineer in charge	Nos.				
32	Supplying, Installing, testing and commissioning of <b>BARAK Plastic Base 2" DG-010 (BSPT)</b> .,air valve 1 each in filter complete with all leads and lifts as directed by Engineer in-charge	Nos.				
33	Supplying, fixing and commissioning of <b>PP Ball Valve 2.0" (Plain)-IND</b> at the flushing in each filter of approved make body including cost of all materials, machinery, labour etc., complete with all leads and lift as directed by Engineer in charge	Nos.				
34	Supplying, Installing, testing and commissioning of <b>10" Butterfly valve</b> confirming to IS 513905 of specified diameter at the outlet at the manifold cost of all jointing materials, machinery, labour etc., complete with all leads and lifts as directed by Engineer in charge	Nos.				
35	Supplying, Installing, testing and commissioning of <b>10" Pressure Reducing Valve</b> confirming to IS 513905 of specified diameter, in the inlet manifold cost of all jointing materials, machinery, labour etc., complete with all leads and lifts as directed by Engineer in charge	Nos.				
36	Supplying, Installing, testing and commissioning of <b>Flange adaptor</b> at the inlet and outlet of the filter unit with all leads and all lifts as directed by Engineer in charge	Nos.				

37	Supplying Installing testing and commissioning <b>Pump house lighting</b> inside and outside including small power with D board, wiring. Lighting fixtures earthing complete, including transformer centre.	Nos.				
38	Supplying, installing, testing and commissioning of <b>Motor Cooling Arrangement</b> , including cost of all materials, machinery, labour, etc., complete with all leads and lifts.	Set				
39	Design, Supply, of <b>PLC control panels</b> for controlling and monitoring, pumps (No. of working Pumps + 1 Stand by), valves, DG set signals, outlet Flow, discharge pressure and Sump Level with Panel including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	Nos.				
40	Design, Supply, and installation of hardware & software of <b>SCADA work stations, printers</b> for controlling and monitoring of Jack Well pumping station and chak control units including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	Nos.				
41	Supply of Pressure Transmitter with 4 - 20 mA output to connect with SCADA system including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	Nos.				
42	Design supply erection testing and commissioning of <b>MS prefabricated cubicals</b> with 2 doors and 2 locks mounted on concrete flat form encasing the valves.	Nos.				
43	Providing supplying fixing of <b>MS Gate</b> for the <b>secondary filter stations</b> including all leads and lifts including cost of materials, labour, compete as per specifications.	Sqm				
44	Supplying and fixing of <b>roof cladding</b> around pump house, structural steel built up columns with approved type of material, approved color as per the instructions of client engineer incharge including the cost of material, labour etc. complete.	Sqm				

45	Supplying, installing, testing and commissioning of <b>100 m<sup>3</sup>/Hr auto filter</b> each at 50Ha subzone. With all leads and lifts etc. as directed by Engineer incharge.	No's				
46	Design manufacture, supply, erection, trial running, performance test and commissioning of <b>Submersible Pump</b> of approved make conforming to IS : 8034 : 2002 with all other standard accessories and safety devices etc., complete as per specifications, terms and conditions of contract.	HP				
46.1	50 HP					
46.2	75 HP					
46.3	100 HP					
46.4	125 HP					
46.5	150 HP					
46.6	175 HP					
46.7	200 HP					
47	Design manufacture, supply, erection, trial running, performance testing and commissioning of <b>Horizontal Centrifugal pumps</b> of approved make conforming to IS: 6595 having specified pump output under specified operating head coupled to LT/HT motor of adequate HP rating operating at 400V with flexible coupling, self water lubricated thrust bearings, discharge Tee with flanged end for connecting delivery pipe with all other standard accessories and safety devices etc., complete as per specifications, terms and conditions of contract.	HP				
47.1	100 HP					
47.2	150 HP					
47.3	200 HP					
47.4	250 HP					
47.5	300 HP					
47.6	350 HP HT MOTOR					
47.7	400 HP HT MOTOR					
47.8	500 HP HT MOTOR					
47.9	600 HP HT MOTOR					
47.10	700 HP HT MOTOR					
48	Supplying Installing Testing and Commissioning of <b>H frame arrangement</b> with pulley for lifting the pumps.	LS				



49	Supplying Installation of <b>UPS system</b> of required capacity for Irrigation Controller, filters and other related accessories of approved make with all leads and lifts.	Set				
50	Supply erection, testing & commissioning of <b>DG set</b> along with all necessary change over panels, including cost of all materials, machinery, labour, etc., complete with all leads and lifts.	No's				
50.1	50 KVA					
50.2	100 KVA					
50.3	150 KVA					
50.4	200 KVA					
50.5	250 KVA					
50.6	300 KVA					
50.7	350 KVA					
50.8	400 KVA					
50.9	450 KVA					
50.10	500 KVA					
51	Construction of <b>Soak Pit</b> including all leads and lifts including cost of materials, labour, complete as per specifications.	No's				
52	Manufacturing, Supplying, laying in position, aligning, jointing, testing and commissioning of <b>electric resistance welded / submerged arc welded 700 mm manifold</b> for inlet and outlet of the filters complete as per specifications with lead upto 1 km and all lifts as directed by Engineer incharge.	No's				
53	Design, Supply & Delivery of necessary Zonal Field Controller, battery, Solar system and Communication Link licenses free Radio 2.4 GHz with necessary cables & accessories to communicate with Control Center including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	No's				
54	Design, Supply & Delivery of necessary Field Control Unit (FCU) and Communication Link license free Radio 2.4 GHz with necessary cables & accessories to communicate with Control Center including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	No's				

55	Supply and delivery of <b>Field Control Unit (FCU)</b> and Communication Link license free Radio 2.4 GHz for controlling <b>3 to 5 Solenoid valves</b> remotely from control room for each shifts in 50 Ha Chak and in 50 Ha there are required no. of shifts, including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	No's				
56	Supply, installation, testing and commissioning of chargeable Batteries to operate <b>field controllers &amp; Solenoid valves</b> for each shifts in 50 Ha Chak and in 50 Ha chak there are required no. of shifts, including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	No's				
57	Supply of Field Control Unit (FCU) and Communication Link license free Radio 2.4 GHz for controlling <b>3 to 4 Solenoid valves</b> remotely from control room for each shifts in 50 Ha Chak and in 50 Ha there are required no. of Shifts including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	No's				
58	Supply of chargeable Batteries to operate field controllers & Solenoid valves, including cost of all materials, labour, loading, unloading etc. and with all lead and lifts etc. complete and as directed by Engineer-in charge.	No's				
59	Supplying Installation of <b>Auxiliary DC supply system</b> of approved make with battery charger cum DCDB with batteries for 110 A hour complete with all accessories.	Set				
60	Providing roofing, <b>cladding</b> around pump house, structural steel built up columns with approved type of material, approved color as per the instructions of client engineer incharge including the cost of material, labour etc. complete.	Sqm				
61	Supply, Installation, testing and commissioning of <b>25 mm Air Release Valve (ARV)</b> 1 near the shift valve. In 50 Ha chak there will be required no. of Shifts with all leads and lifts etc. as directed by Engineer - in charge.	Each				

62	Supply, installation, testing and commissioning of <b>60 Ltr Fertilizer tank</b> in every 1 Ha and the avg no of fertilizer tank comes up to 52 in 50 Ha chak with all lead and lifts etc. complete and as directed by Engineer-in charge.	Each				
63	Supply, installation, testing and commissioning of <b>75 mm control valve</b> in every 1 Ha. And the avg. no of control valve up to 52 in 50 Ha chak with all lead and lifts etc. complete and as directed by Engineer-in charge.	Each				
64	Supply, installation, testing and commissioning of <b>63 mm end cap</b> 1 in every 1 Ha and the avg. no of control valve up to 52 in 50 Ha chak with all lead and lifts etc. complete and as directed by Engineer-in charge.	Each				
65	Supplying <b>PVC Pipe with diameter- IND confirming to IS 4985 : 2000</b> with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading and unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour, with all leads and lifts including encasing the pipe all-round to a depth of not less than 15 cms with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test you the required pressure as per ISS (contractor will make his own arrangements for procuring water for testing).	Rmt				
65.1	63 mm - 04 Kg / Cm <sup>2</sup>					
65.2	75 mm - 04 Kg / Cm <sup>2</sup>					
65.3	90 mm - 04 Kg / Cm <sup>2</sup>					
65.4	110 mm - 04 Kg / Cm <sup>2</sup>					
65.5	140 mm - 04 Kg / Cm <sup>2</sup>					
65.6	160 mm - 04 Kg / Cm <sup>2</sup>					
65.7	180 mm - 04 Kg / Cm <sup>2</sup>					
65.8	200 mm - 04 Kg / Cm <sup>2</sup>					
66	Supply, installation, testing and commissioning of <b>16 mm Plain lateral</b> as per ISO Standards, for every 50 Ha Chak ((Sub main Length / Lateral spacing) * no.	Rmt				

	of sides) with all lead and lifts etc. complete and as directed by Engineer-in charge.					
67	Supplying valves of board approved make confirming to relevant ISS with latest amendments as detailed below of following diameter and types and conveying to work site, loading, unloading, stacking etc., complete with all lead and lift. The rate is inclusive of cost of Bolts and Nuts. <b>Water type Butterfly valve with flanges PN 1.0</b> conforming to BS:5155.	No's				
67.1	100 mm					
67.2	150 mm					
67.3	200 mm					
67.4	250 mm					
67.5	300 mm					
67.6	350 mm					
67.7	400 mm					
68	Supplying valves of board approved make confirming to relevant ISS with latest amendments as detailed below of following diameter and types and conveying to work site, loading, unloading, stacking etc., complete with all lead and lift. The rate is inclusive of cost of Bolts and Nuts. <b>Water type Butterfly valve with flanges PN 1.6</b> conforming to BS:5155.	No's				
68.1	100 mm					
68.2	150 mm					
68.3	200 mm					
68.4	250 mm					
68.5	300 mm					
68.6	350 mm					
68.7	400 mm					

Sd/-  
**(H.TATASHIVAN)**  
Executive Engineer,  
KNNL, Shiggaon Lift Irrigation Division,  
Dharwad.

1. Copy submitted to Managing Director, KNNL, 4<sup>th</sup> Floor, Coffee Board Building, Dr.B.R. Ambedkar Veedhi, Bangalore-1 for kind information.
2. Copy submitted to Chief Engineer, KNNL, Malaprabha Project Zone, Dharwad for kind information.
3. Copy submitted to Superintending Engineer, KNNL, MRBCC Circle, Dharwad for kind information.
4. Copy to forwarded to Assistant Executive Engineer, KNNL, Shiggaon Lift Irrigation Sub Division No.1, & 2, Dharwad for information.
5. Copy to Sri.Nanjesh, System Maintenance co-ordinator, KNNL, 4<sup>th</sup> Floor, Coffee Board Building, Dr.B.R. Ambedkar Veedhi, Bangalore-1 for information and requested to publish the Quotation notification in the KNNL website.
6. Copy to Executive Engineer Table.
7. Copy to Division Account section for information and necessary action.
8. Copy to Office Notice Board.

Executive Engineer,  
KNNL, Shiggaon Lift Irrigation Division,  
Dharwad.