

Corrigendum 4 dated 19.06.2021 to Tender Specification BHEL: PSSR: SCT: 1965 for the work of Erection, welding, NDE & testing of 1000 MWe Turbine, Generator, Condenser, Static, Rotary Equipments, Auxiliary Systems, Cross Over Piping, Integral Piping, Fabrication of Structural Steel, Pipe Supports, Metal Structures, Platforms, Final Painting including Handling of Materials at BHEL/ Client's Stores/ Storage Yard, Transportation to site for Unit 3 & Unit 4 of Kudankulam Nuclear Power Project (KKNPP), Radhapuram Taluk, Thirunelveli District, Tamil Nadu

A. The following clause is added under Note SI No. iv to Annexure – 1 of Notice Inviting Tender: -

- iv) Wherever the credential submitted for satisfying the Technical PQR is from direct order of BHEL, bidders to ensure that relevant certificate issued by respective contracting department of BHEL is provided as part of the offer. Certificates can be obtained from BHEL by submitting request through online portal i.e <https://siddhi.bhel.in>.

B. Some of the Bidders had asked queries in the published Tender Specification. The clarifications issued by BHEL are furnished below:

SI No.	Reference clause of Tender Document	Existing provision	Bidder's query	BHEL's clarification
1	TCC VOLUME-IA PART-I CHAPTER – II Scope of Works Note 1 of Clause no. 1.2.13.1 (Page No.45 of 608)	For lifting of stator, Turbine hall EOT crane- 180T +180T crane will be provided by NPCIL. However, the contractor shall deploy qualified and experienced EOT Crane operator. For threading in and out of rotor, web slings of suitable length and capacity shall be arranged by the contractor. During erection works, fire retardant tarpaulin to be used as a dust proof cover on Rotor and Stator. Fire retardant tarpaulin will be issued by BHEL	We understand that EOT crane in TG hall will be sufficient for Lifting Generator Stator Request BHEL to arrangement suitable beams for Stator Erection by Tandem Operation	Beams for Stator Erection will be provided by NPCIL. However required quantity / capacity slings for stator lifting shall be arranged by the contractor
2	TCC VOLUME-IA PART-I CHAPTER – II Scope of Works Clause no. 1.2.17.11 (Page No.88 of 608)	Cold bending: Where elbows not available for the pipelines of OD 57 mm and below, the contractor shall fabricate bends by cold bending as per the approved procedure and as instructed by the EIC.	Request BHEL to arrange Approximate quantity to be considered for Cold bending including specifications (Dia , Angle of Bend etc)	Quantity of cold bending of pipelines will be based on site routing requirement and shall be the in scope of contractor

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SI No.	Reference clause of Tender Document	Existing provision	Bidder's query	BHEL's clarification
3	TCC VOLUME-IA PART-I CHAPTER – II Scope of Works Clause no. 1.2.19 (Page No.108 of 608)	Grit blasting, primer application & painting has to be performed for the various process system pipe lines, fittings, equipment's, supports, structural items and other surfaces as mentioned in the working drawings. Pipes and structures shall be cleaned, de-burred, milled scale, oil if any are to be removed before grit blasting. Material shall be inspected for any damage, lamination etc.	Request BHEL to provide confirmation about Grit Material to be considered and also request to provide details specifications of Primer Paint	Grit blasting & Painting specification is specified in Annexure – VII- Technical specification for Grit Blasting & supply and application of Painting of TCC VOLUME-IA PART-I CHAPTER – II Scope of Works (Pg 199 to 253 of 608)
4	TCC VOLUME-IA PART-I CHAPTER– II Scope of Works Clause no. 1.2.19 (Page No.108 of 608)	Grit Blasting and Painting Works	Request BHEL to provide detailed breakup of Pipes and Equipment to be considered for Painting	Detailed breakup of pipes size wise & equipment list is provided in TCC VOLUME-IA PART-I CHAPTER –IX Bill of Quantity (Pg 312 to 385 of 608).
5	TCC VOLUME-IA PART-I CHAPTER– VII Terms of Payment (Page No.294 of 309)	L.10 - Supply, machining of permanent packer plates and shims for all equipment's - 13 T Per Unit	Request BHEL to provide Weightage towards supply & Machining of Packer plates and shims for all the Equipment	Kindly refer Revised Terms of payment published in Corrigendum 3 dt 16.06.2021 for weightage towards supply & Machining of Packer plates and shims for all the Equipment.
6	TCC VOLUME-IA PART-I CHAPTER– II Scope of Works Clause no. 1.2.19 (Page No.108 of 608)	Weightages: A.4 Cross over piping, F1.Integral Piping I1 to I3 - Grit Blasting and Painting works L3 to L6- Concreting & Grouting works	Request BHEL to verify the weightages of the provided items and enhance same as per present market scenarios	Tender condition prevails.

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SI No.	Reference clause of Tender Document	Existing provision	Bidder's query	BHEL's clarification
7	TCC VOLUME-IA PART-I CHAPTER- II Scope of Works Claus no. 1.2.17.9 & 1.2.17.10 (Page No .86 & 87 of 108)	Acid Pickling, Passivation of SS Pipes & Fittings	Request BHEL to provide detailed procedure along with Specifications	Contractor has to prepare procedure for Acid pickling for oil pipe lines (CS) and passivation of SS pipe lines and get it approved by BHEL & NPCIL.
8	TCC VOLUME-IA PART-I CHAPTER- IX, BOQ (Page No.312 to 348 of 608)	-	Delivery Conditions of Major Pumps like Main Condenser Cooling water pump, Essential & Non-Essential Load pumps, Fish Diversion facility Pumps etc	PI refer TCC VOLUME-IA PART-I CHAPTER – II Scope of Works, Clause no. 1.2.15 Rotary Equipments (page no 52 to 69 of 608) for more details
9	TCC VOLUME-IA PART-I CHAPTER- IX, BOQ (Page No.312 to 348 of 608)	*Cross Over Piping (CS, SS Material) along with Supports *Integral Piping (CS, SS Material) along with Supports	Please provide a separate weightage for CS, SS Material , Hangers & Supports for Piping Works	Tender condition prevails
10	TCC VOLUME-IA PART-I CHAPTER- IX, BOQ (Page No.312 to 348 of 608)	Concreting & Grouting Works	As the scope of works includes Supply and Application, we cannot forecast actual quantity requirement. Hence, we request BHEL to provide a separate line item for the scope and shall be compensated as per actual executed quantity	It is Lump sum contract. Tentative/ Approx quantity indicated in BOQ is for assessing the quantum of work. Tender condition prevails
11	TCC VOLUME-IA PART-I CHAPTER- IX, BOQ (Page No.312 to 348 of 608)	Painting works	As the scope of works includes Supply & Application, we cannot forecast actual quantity requirement. Hence, we request BHEL to provide a separate line item for the scope and shall be compensated as per actual executed quantity	It is Lump sum contract. Tentative/Appx quantity indicated in BOQ is for assessing the quantum of work. Tender condition prevails

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SI No.	Reference clause of Tender Document	Existing provision	Bidder's query	BHEL's clarification
12	TCC VOLUME-IA PART-I CHAPTER- IX, BOQ (Page No.312 to 348 of 608)	Supply, machining of permanent packer plates and shims for all equipment's	As the scope of works includes Supply & machining works, we cannot forecast actual quantity requirement. Hence, we request BHEL to provide a separate line item for the scope and shall be compensated as per actual executed quantity	It is Lump sum contract. Tentative/Appx quantity indicated in BOQ is for assessing the quantum of work. Tender condition prevails
13	TCC VOLUME-IA PART-I CHAPTER- IX, BOQ (Page No.312 to 348 of 608)	Supply of Consumables for Re-preservation works of Equipment & Piping	As the scope of works includes Supply, we cannot forecast actual quantity requirement. Hence, we request BHEL to provide a separate line item for the scope and shall be compensated as per actual executed quantity	It is Lump sum contract. Supply quantity is limited to quantity mentioned in BOQ - refer Note 2 under Painting & Miscellaneous Works in TCC VOLUME-IA PART-I CHAPTER- IX, BOQ (Page 316 of 608). Tender condition prevails
14	TCC VOLUME-IA PART-I CHAPTER - II Scope of work Clause 1.2.6.1 SI. No. 4 Page:10	4. The contractor shall etc. Note: Shifting of Heavy Critical ODC equipment from store to delivery points is the scope of NPCIL	Please confirm ,whether delivery of ODC equipment shall be done to near erection location & transportation by NPCIL/BHEL	Shifting of heavy, critical and ODC equipment from NPCIL stores to outside of respective TG building are in the scope of NPCIL.
15	TCC VOLUME-IA PART-I CHAPTER - II Scope of work Clause 1.2.17.1 SI No. 6 Page:78	6. For any cutting edge preparation of small bore & big bore pipe lines required to suit the layout of piping part of scope	Please clarify, the payment terms for this work.	For any cutting and edge preparation of small bore & big bore pipelines required to suit the layout of piping is part of scope and no separate payment is provided.

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SI No.	Reference clause of Tender Document	Existing provision	Bidder's query	BHEL's clarification
16	TCC VOLUME-IA PART-I CHAPTER - IV T&Ps and MMEs to be deployed by Contractor Page:279	1.4.1 The following indicative major Tools & Plants (T&P) shall be arranged by the contractor within the quoted rate for execution of the scope of works covered under this contract.	Please confirm whether the major Tools & Plants indicated both units # 3 & 4	T&PS and MMEs indicated in VOLUME-IA PART-I CHAPTER – IV, T&Ps and MMEs to be Deployed By Contractor of TCC (Pg 279 to 284 of 608) is for both units 3 & 4.
17	TCC VOLUME-IA PART-I CHAPTER- VII Terms of Payment Clause: 1.7.3.1 TCC VOLUME-IA PART-I CHAPTER - IX Bill of Quantity	Terms of Payment 1.7.3.1. The break-up of pro-rata payment detailed below are applicable for both units combined. Tentative weight schedule for Kudankulam TG main package works in Unit 3 & 4, Weight Schedule- Summary	The payment for this tender is based on percentage of weightage combined for both units, with respect to the weight schedule Summary, wherein the quantities specified varies in terms of tonnage as well as its scope for each unit. Request clarify if each unit payment is to be construed as half the quoted / accepted contract price of 2 Units.	Each unit price shall be arrived based on each unit tonnage as mentioned weight schedule summary in TCC VOLUME-IA PART-I CHAPTER – IX, Bill of Quantity vide page 312 to 314 of 608. Accordingly, the % of each unit price are as below. Unit- 3 - 48.56% Lump sum quoted price Unit-4 - 51.44% of Lump sum quoted price.
18	General Conditions of Contract Clause 2.24.1 TCC VOLUME-IA PART-I CHAPTER – II Scope of Work Clause no. 1.2.27.2	As per clause 2.24.1 Performance Guarantee period is 12 months from completion of work. As per tender responsibility of contracted work is up to completion of CCC. After all the above information are compiled, verified by the EIC and certified for submission, the 'Construction Completion Certificate' and System Transfer from 'Construction to Commissioning' in the prescribed format along with the System / Equipment History Docket shall be transferred for NPCIL records and reference. Final completion certificate will be issued only after the ENC has	If the Time Gap in completion of CCC of each unit is more than 4 months (as seen from past NPCIL projects, it is more than 12 months) will the Performance Guarantee period be construed as applicable for completion of CCC of each unit. Please clarify.	PI refer TCC VOLUME-IA PART-I CHAPTER – VI Time schedule, clause no. 1.6.7, reproduced hereunder. "Guarantee period of twelve (12) Months shall commence from the date of completion of entire work as specified in the contract as certified by BHEL Engineer" Hence guarantee period shall commence from the date of Final completion certificate of last unit

SI No.	Reference clause of Tender Document	Existing provision	Bidder's query	BHEL's clarification
		accepted all CCC's and after other provisions of general contract conditions are duly met.		
19	-	IBR Clearance for Integral Piping system	Please clarify, whether the scope of work involved IBR clearance.	IBR clearance is not applicable for this contract.
20	-	Drawing	Please share the TG Layout drawing	Drawings are enclosed along with this corrigendum.

C. The following information is added in existing clause:

Clause ref.	Existing clause	Following information is added in existing clause
TCC VOLUME-IA PART-I CHAPTER – II Scope of Works 1.2.17.21(page no 98-99 of 608)	1.2.17.21 Flushing of pipelines	Note to clause No 1.2.17.21: Quantity of oil (in barrels) supplied by NPCIL as Free Issue for both units Lube Oil quantity- 1969 barrels Seal oil quantity – 300 barrels
VOLUME-IA PART-I CHAPTER – II TCC Scope of Works 1.2.18.4 SI. No 3 (page no 106-107 of 608)	3. All NDE is part of the scope	Note to clause No 1.2.18.4 SI. No 3 Tentative quantity of Weld joint inspection by Vacuum box test (VBT) is around 1750 RM for both units and Kerosene leak test(KLT) is around 700 RM for both units. The quantity may vary depends on site condition and to be carried out by the contractor with in the Lump sum quoted price
VOLUME-IA PART-I CHAPTER – II TCC Scope of Works 1.2.18.5(page no 107 of 608)	1.2.18.5 Fixing of Hilti fasteners: (Anchor Fasteners shall be supplied by BHEL as free issue)	Note to clause No 1.2.18.5: Tentative quantity of anchor fasteners of various sizes is to be fixed by the contractor is around 7500 nos. for both the units. Quantity may vary depending on site condition and to be carried out by the contractor with in the Lump sum quoted price

Note:

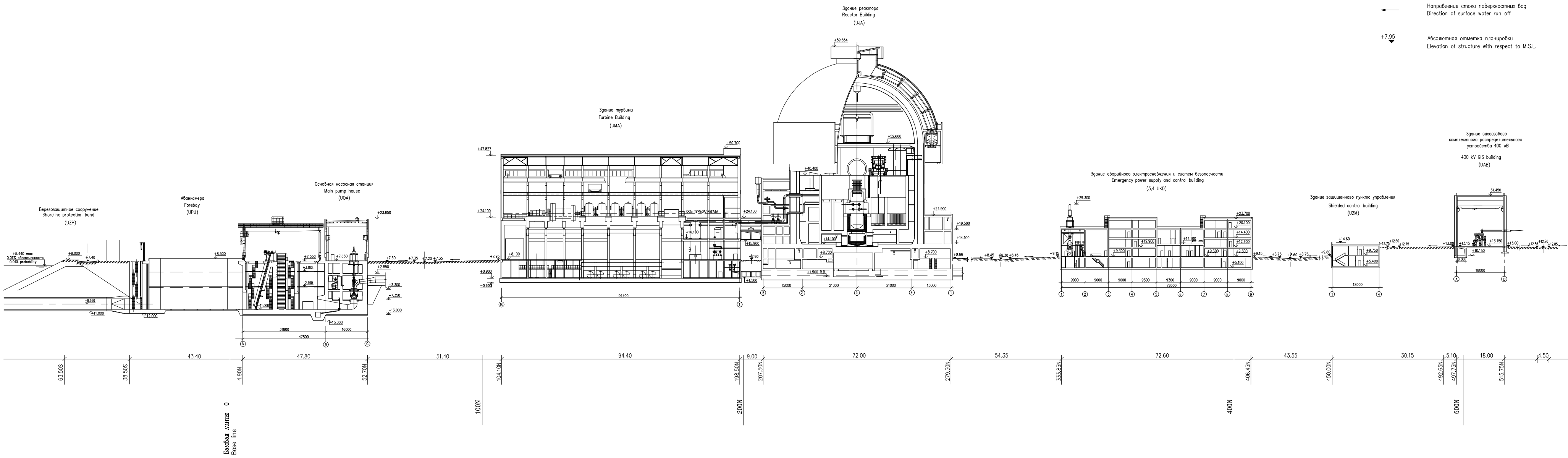
- 1) All other conditions of the tender specification remain unchanged.
- 2) Bidders are requested to consider this corrigendum as part of tender specification and quote accordingly.

-Sd-
Sreenath N G
Dy. Manager / Subcontracts

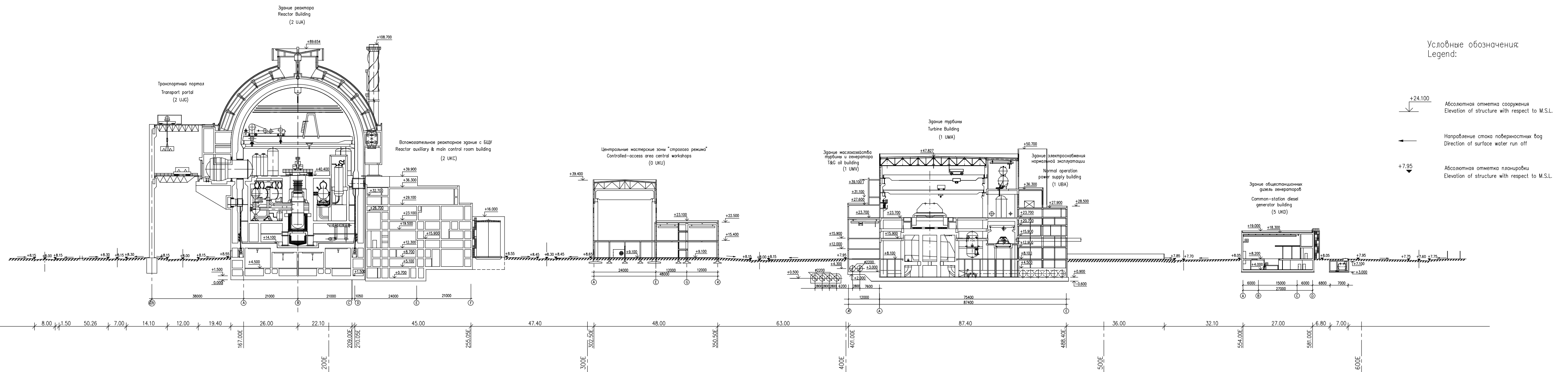
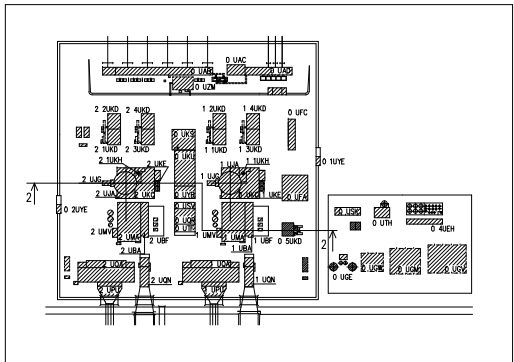
ПАЗРЕЗ 1-1
SECTION 1-1

Условные обозначения:
Legend:

- +24.100
↓
Абсолютная отметка сооружения
Elevation of structure with respect to M.S.L.
- ←
Направление стока поверхностных вод
Direction of surface water run off
- +7.95
↓
Абсолютная отметка планировки
Elevation of structure with respect to M.S.L.



P A 3 P E 3 2 - 2
S E C T I O N 2 - 2

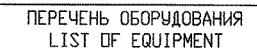
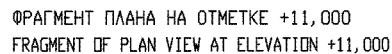


- Условные обозначения:
Legend:
- +24.100 Абсолютная отметка сооружения
Elevation of structure with respect to M.S.L.
 - Направление стока поверхностных вод
Direction of surface water run off
 - +7.95 Абсолютная отметка планировки
Elevation of structure with respect to M.S.L.

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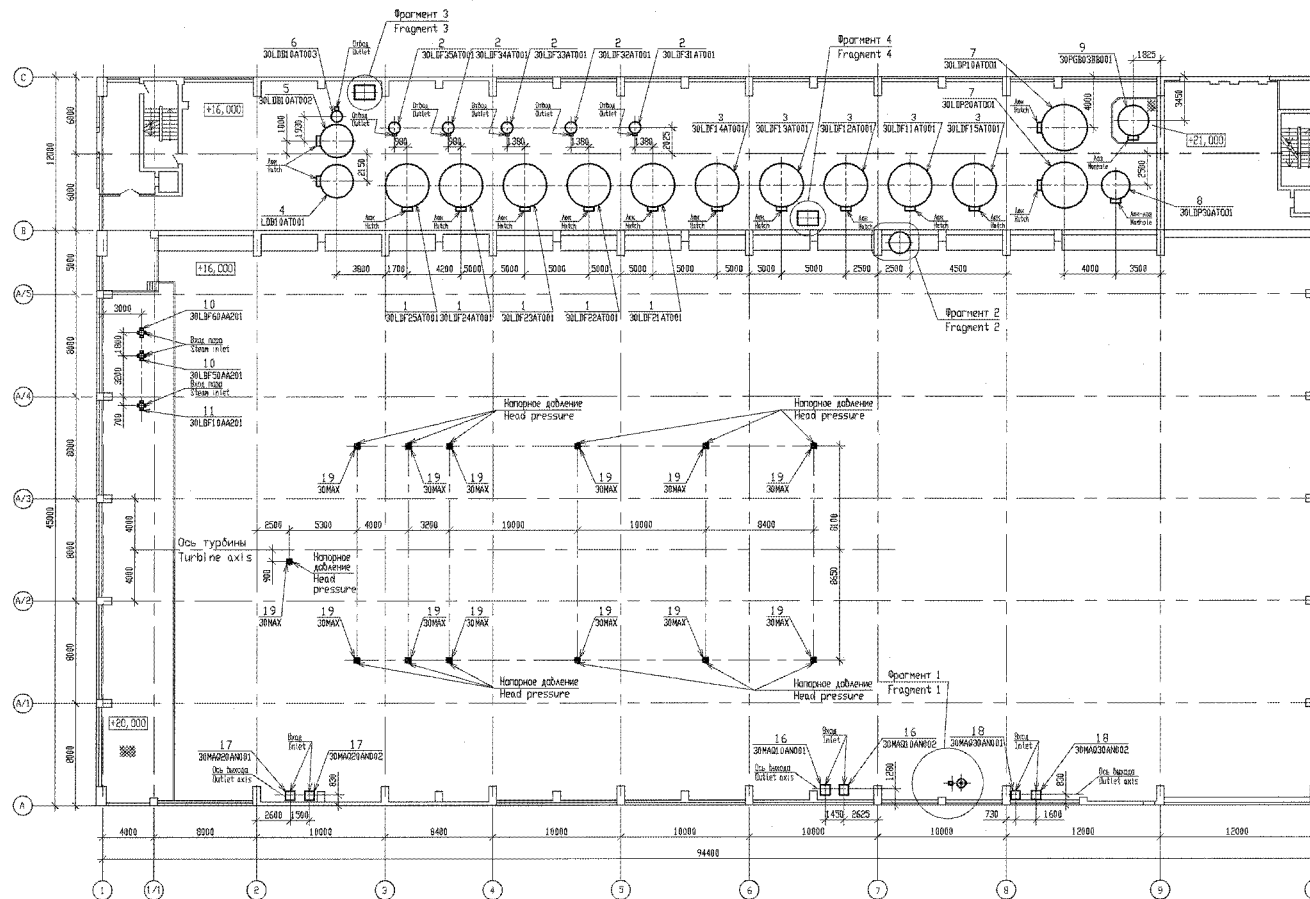
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				АЭС "КУДАНКУЛАМ" БЛОК 3 NPP "KUDANKULAM" UNIT 3			
Имя	Код	Адрес	Имя	Подпись	Дата	30UMA	
Rev	U-ty	Sheet	Doc. No	Signature	Date	Установленные значения оборудования на отметках +6,000 и +7,800 30UMA	Страна
Обработка	Chernov	Имя	Подпись	Дата	Installation drawings of equipment at elevations +6,000 and +7,800 30UMA	Phase	Sheet
Исходный	Исходный	Имя	Подпись	Дата	План на отметках +6,000 и +7,800 30UMA	WB	2
Рисунки	Алексеев	Имя	Подпись	Дата	Plan view at elevation +6,000 and +7,800 30UMA	 "Atomsenergo" project Moscow 2018	

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Technical drawing of a shaft with a keyway. The drawing includes the following dimensions and labels:

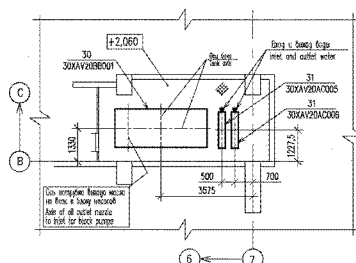
- Overall length: 560
- Keyway width: 1700
- Keyway depth: 1000
- Keyway radius: R1000
- Keyway label: "SOLCH 088061"
- Feature labels: "Spline bore", "Water outlet"
- Section lines: A-A (horizontal), B-B (vertical)
- View indicators: 3 (top), 7 (bottom), 8 (right), 9 (left)

Technical drawing of a rectangular metal box. The drawing includes a top view and a side view. The top view shows a box with a central circular feature and a smaller circular feature on the left. The side view shows the box's profile with a height dimension of 91.0. A label '1.3' points to a feature on the right side. A label 'Питание насоса и насосов' is at the top left, and 'Oil feed to oil tank' is below it. A label '6/1' is at the bottom left, and '450' is at the bottom right.

№ п.п. №. of pos.	Маркировка Marking	Наименование Name	Отметка установки Installation elev. m	Примечание Note
1	30L1P21AT001 30L1P21AT001 30L1P23AT001 30L1P24AT001 30L1P25AT001	Фильтр смешанного действия Mixed action Filter	+16, 850	См. лист 3 See sheet 3
2	30L1P31AT001 30L1P32AT001 30L1P33AT001 30L1P34AT001 30L1P35AT001	Фильтр-ловушка Catcher filter	+18, 845	См. лист 4 See sheet 4
3	30L1P11AT001 30L1P12AT001 30L1P13AT001 30L1P14AT001 30L1P15AT001	Настенный фильтр H-tation Filter	+16, 850	См. лист 5 See sheet 5
4	30L1P16AT001	Механический фильтр Mechanical filter	+16, 850	См. лист 6 See sheet 6
5	30L1P16AT002	Фильтр смешанного действия с внутренней регенерацией Mixed action filter with internal regeneration	+16, 850	См. лист 7 See sheet 7
6	30L1P16AT003	Фильтр-ловушка Catcher filter	+17, 940	См. лист 8 See sheet 8
7	30L1P16AT000 30L1P20AT000	Фильтр-регенератор Regenerating filter	+16, 850	См. лист 9 See sheet 9
8	30L1P31AT001	Фильтр для выгрузки среднего слоя ионита Median Ionite layer unloading Filter	+16, 850	См. лист 10 See sheet 10
9	30P30C30B001	Бак-компенсатор Tank-compensator	+21, 000	См. лист 11 See sheet 11
10	30L1P16A0001 30L1P16A0001	Быстродействующая рециркуляционная установка подачи пара на дозатор Fast-acting steam dump valve with discharge to desolator	+20, 036	См. лист 12 See sheet 12
11	30L1P16A0002	Быстродействующая рециркуляционная установка подачи пара на дозатор Fast-acting steam dump valve with discharge to auxiliary header	+20, 036	См. лист 13 See sheet 13
12	30LCL10B0001	Бак подпитки гидрозатворов торцевых уплотнений КЭН-11 Feed tank of pressure locks of condensate pumps	+28, 500	См. лист 14 See sheet 14
13	30WAC10B0001 30WAC10B0001	Бак запасной резервной Reserve oil tank	+17, 400	См. лист 15 See sheet 15
14	30WAC17AT001	Маслоуловитель Oil trap	+16, 204	См. лист 16 See sheet 16
15	30MKV33M001	Вентилятор центробежный Centrifugal fan	+17, 375	См. лист 17 See sheet 17
16	30WAG1A0001 30WAG1A0002	Установочная чертёж вентилятора отсоса масляных паров Installation drawing of exhaust fan to evacuate oil vapour	+16, 100	См. лист 18 See sheet 18
17	30WAG2A0001 30WAG2A0002	Установочная чертёж вентилятора отсоса масляных паров Installation drawing of exhaust fan to evacuate oil vapour	+16, 104	См. лист 19 See sheet 19
18	30WAG3A0001 30WAG3A0002	Установочная чертёж вентилятора отсоса масляных паров Installation drawing of exhaust fan to evacuate oil vapour	+16, 104	См. лист 20 See sheet 20
19	30IMX1	Дымосос Asker	+16, 435	См. лист 21 See sheet 21

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ПЕРЕЧЕНЬ ОБОРУДОВАНИЯ
LIST OF EQUIPMENT



№ поз. No. of pos.	Маркировка Marking	Наименование Name	Омметр установки Installation elev.	Примечание Note
1	33P4501-144P001	Подъемный насос эжектор Water lifting pump for ejectors set	0,000	Омметр узла See sheet 4
2	33P5P001A01.002	Насос-дозатор серной кислоты Sulphuric acid dosing pump	0,000	Омметр узла See sheet 5
3	33P5P001A01.002	Насос-дозатор щелочи Alkali dosing pump	0,000	Омметр узла See sheet 22
4	33P5P001A01.002	Насос-дозатор аммиака Ammonia dosing pump	0,000	Омметр узла See sheet 5
5	33L1P5P001	Насос-омека Amalgam pump	0,000	Омметр узла See sheet 3
6	33L5P001A01.002	Насос-дозатор гидразина Hydrazine dosing pump	0,000	Омметр узла See sheet 9
7	33L5P001A01.002	Насос-дозатор гидразина Hydrazine dosing pump	0,000	Омметр узла See sheet 10
8	33L5P001B01.002	Бак-мерная серная кислота Sulphuric acid measuring tank	0,000	Омметр узла See sheet 11
9	33L5P001B01.002	Бак-мерная серная кислота Potassium chloride measuring tank	0,000	Омметр узла See sheet 12
10	33L5P001B01	Бак аммиака Ammonia tank	0,000	Омметр узла See sheet 13
11	33L5P001B01.002	Бак раствора аммиака Ammonia solution tank	0,000	Омметр узла See sheet 14
12	33L5P001B01.002	Бак раствора гидразина Hydrazine solution tank	0,000	Омметр узла See sheet 15
13	33L5P001B01	Расширитель дренажа Drain expansion tank	0,000	Омметр узла See sheet 16
14	33L5P001B01	Влагоотделитель Moisture separator	0,000	Омметр узла See sheet 17
15	33L5C0156001	Бак герметизации воздухоподогревателей торцевых уплотнений валов Feed tank of pressure locks of discharge pumps	0,000	Омметр узла See sheet 18
16	33W002747001	Насос для перекачки отработавших масел Used oil transfer pump	0,000	Омметр узла See sheet 19
17	33W0043130A001	Аккумулятор пружинно-воздушный Spring-weight bob accumulator	0,000	Омметр узла See sheet 20
18	33L5P001B001	Бак раствора трифосфатного Tank for phosphoric solution	0,000	Омметр узла See sheet 21
19	33L5P001B01.002	Насос подачи раствора трифосфатного Phosphate dosing pump	0,000	Омметр узла See sheet 22
20	33W001060001	Блок несамонивелирующей системы регулирования Governing system of supply unit	0,000	Омметр узла See sheet 23
21	33W024304001	Насос электриводящего насоса системы регулирования Governing system of filtration electric pump	0,000	Омметр узла See sheet 24
22	33L550000001	Конденсаторный бак Condensate tank	0,000	Омметр узла See sheet 25
23	33L3301	Система питания мембранных сепараторов обратных осмотов Feed water's membrane separators feeding system	0,000	Омметр узла See sheet 26
24	33W001060001	Бак обводной Water tank	0,000	Омметр узла See sheet 27
25	33W001213AC001	Теплообменник Heat exchanger	0,000	Омметр узла See sheet 28
26	33W001213AC001	Насос рециркуляции Recirculation pump	0,000	Омметр узла See sheet 29
27	33W001213AC001	Фильтр масла Oil filter	0,000	Омметр узла See sheet 30
28	33L5C0156001A01	Регулятор уровня конденсата Level control device of condensate	0,000	Омметр узла See sheet 31
29	33W001213AC001	Конденсатор ПИИ Condenser turbine feeding pump	0,000	Омметр узла See sheet 32
30	33W001213AC001	Бак системы ПИИ Oil tank turbine feeding pump	0,000	Омметр узла See sheet 33
31	33W001213AC001	Насос системы ПИИ Oil cooler turbine feeding pump	0,000	Омметр узла See sheet 34
32	33W001213AC001	Фильтр масла Oil exchange filter	0,000	Омметр узла See sheet 35
33	33W001213AC001	Защита гидравлическая Hydraulic seal	0,000	Омметр узла See sheet 36

Package Number 3 9 6 92
File: R01_KK34_30UMA 0 TM OK WD002_002=1

R01.KK34.30UMA.0.TM.OK.WD002

АЭС "КУДАНКУЛАМ" БЛОК	3
АЭС "КУДАНКУЛАМ" БЛОК	

NPP "KUDANKULAM" UNIT			
doma	30UMA	Amoara	Fluore

Установочные чертежи оборудования на отметке 0,000	Phase	Sheet
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300MA		
Installation drawings of equipment at elevation 0 000	WD	2

[illegible]

Plan view at elevation 0,000

[illegible]

Данный чертеж
не подлежит размножению
или передаче другим
организациям и лицам
без согласия АО
"Атомэнергоспроект"

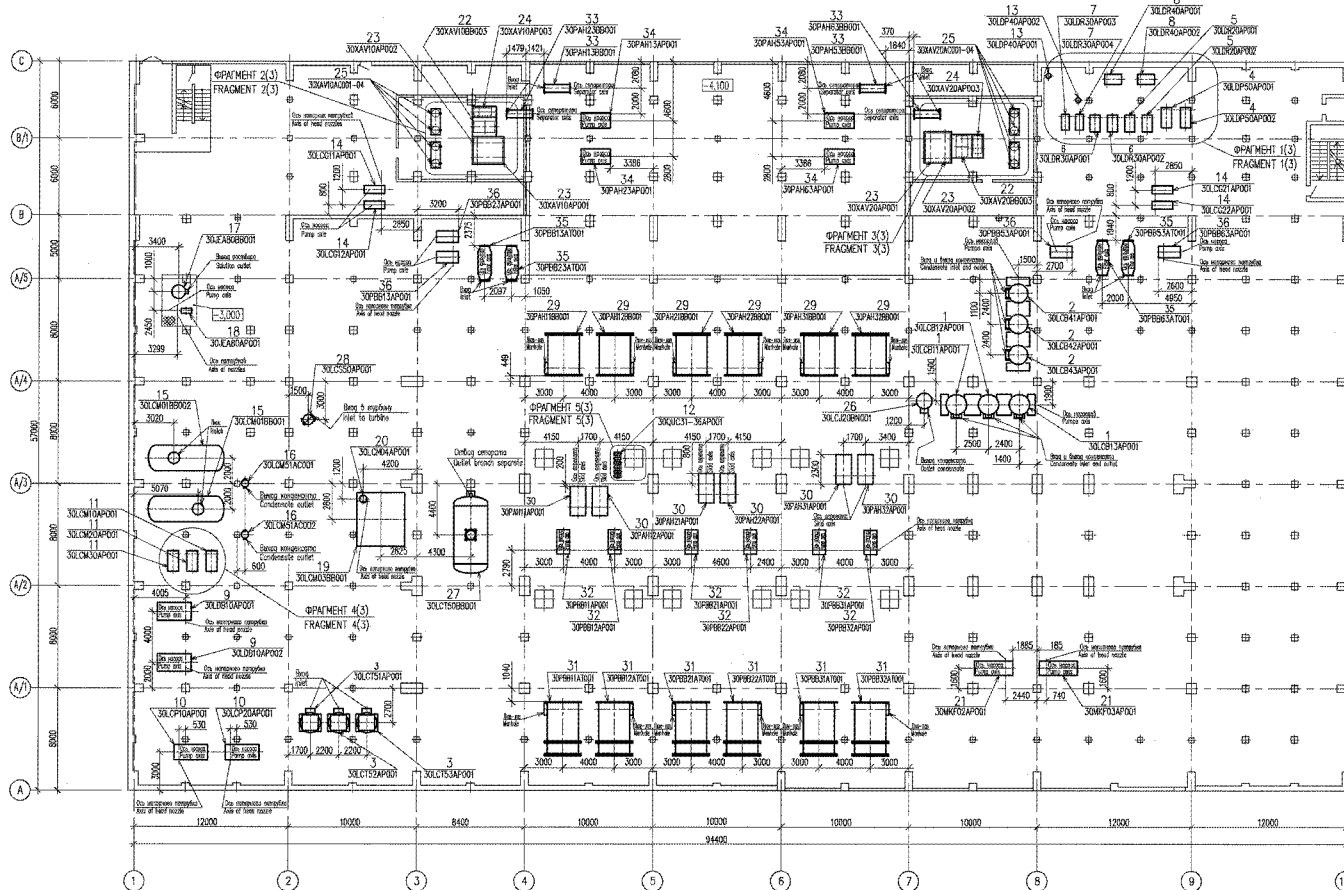
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1	-	Repl. 1738-18			
Имя	Кол. яз.	Илуст.	Н. гок.	Погрмучо	Док.
Rev.	Q-ty of parts	Sheet	Doc. No	Signature	Doc.
Умбегуна Approved			Pogachev	<i>[Signature]</i>	21.
Н. комп. Inspector		Tsoy		<i>[Signature]</i>	21.
Поздн. Design		Alekseev		<i>[Signature]</i>	21.

qopnm/size /

ПЛАН НА ОТМЕТКЕ -7,200; -4,100
PLAN VIEW AT ELEVATION -7,200; -4,100

ПЕРЕЧЕНЬ ОБОРУДОВАНИЯ
LIST OF EQUIPMENT



№ п.п. No. of pos.	Маркировка Marking	Наименование Name	Отметка установки Installation elev.	Примечание Note
1	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Насос конденсатный 1-й ступени Condensate pump of 1-st stage	-7,200	См. лист 4 See sheet 4
2	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Насос конденсатный 2-й ступени Condensate pump of 2-st stage	-7,200	См. лист 5 See sheet 5
3	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Насос откачки конденсата ЦП и ПНД-4 Separate exhaust pump for MSR and LPH-4	-7,200	См. лист 6 See sheet 6
4	СОЛС11А1001 СОЛС12А1001	Насос отстойный для MSR Washing waters pump	-7,200	См. лист 7 See sheet 7
5	СОЛС11А1001 СОЛС12А1001	Насос отстойный и регенерационный для MSR Washing and regeneration waters pump	-7,200	См. лист 8 See sheet 8
6	СОЛС11А1001 СОЛС12А1001	Насос откачки для MSR Locking waters pump	-7,200	См. лист 9 See sheet 9
7	СОЛС11А1001 СОЛС12А1001	Насос откачки шлама Sludge pump	-7,200	См. лист 10 See sheet 10
8	СОЛС11А1001 СОЛС12А1001	Насос откачки для MSR Locking waters pump	-7,200	См. лист 11 See sheet 11
9	СОЛС11А1001 СОЛС12А1001	Насос откачки конденсата Contaminated condensate pump	-7,200	См. лист 12 See sheet 12
10	СОЛС11А1001 СОЛС12А1001	Насос обезжелезивания Demineralized water pump	-7,200	См. лист 13 See sheet 13
11	СОЛС11А1001 СОЛС12А1001	Насос дренажный Drain pump	-7,200	См. лист 14 See sheet 14
12	СОЛС11А1001 СОЛС12А1001	Насос мембранный вакуумный Membrane sealed pump	-7,200	См. лист 15 See sheet 15
13	СОЛС11А1001 СОЛС12А1001	Насос дренажный для MSR Drainage tank pump	-7,200	См. лист 16 See sheet 16
14	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Конденсатный насос конденсатора ПТН Condensate pump of turbine-driven pump condenser	-7,200	См. лист 17 See sheet 17
15	СОЛС11А1001 СОЛС12А1001	Бак дренажный Drain tank	-7,200	См. лист 18 See sheet 18
16	СОЛС11А1001 СОЛС12А1001	Охлаждающая конденсатора дренажная Condensate cooler of drains expansion tank	-7,200	См. лист 19 See sheet 19
17	СОЛС11А1001 СОЛС12А1001	Бак раствора NaOH NaOH solution tank	-3,000	См. лист 20 See sheet 20
18	СОЛС11А1001 СОЛС12А1001	Насос раствора NaOH NaOH solution pump	-3,000	См. лист 21 See sheet 21
19	СОЛС11А1001 СОЛС12А1001	Бак низкого уровня Low elevation tank	-7,200	См. лист 22 See sheet 22
20	СОЛС11А1001 СОЛС12А1001	Насос для низкого уровня Low elevation tank pump	-7,200	См. лист 23 See sheet 23
21	СОЛС11А1001 СОЛС12А1001	Насос системы охлаждения статора генератора Pump of generator stator cooling system	-7,200	См. лист 24 See sheet 24
22	СОЛС11А1001 СОЛС12А1001	Бак дренажный Drain tank	-7,200	См. лист 25 See sheet 25
23	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Насос масляный Oil pump	-7,200	См. лист 26 See sheet 26
24	СОЛС11А1001 СОЛС12А1001	Остановочный насос Regulator pump	-7,200	См. лист 27 See sheet 27
25	СОЛС11А1001 СОЛС12А1001	Маслоохладитель Oil cooler	-7,200	См. лист 28 See sheet 28
26	СОЛС11А1001 СОЛС12А1001	Гидроаккумулятор ПНД-2 Hydraulic LPH-2	-7,200	См. лист 29 See sheet 29
27	СОЛС11А1001 СОЛС12А1001	Сепараторы Separate collector	-4,100	См. лист 30 See sheet 30
28	СОЛС11А1001 СОЛС12А1001	Насос откачки конденсата вращающегося пара ЦП Pump to transfer heating steam MSR condensate with turbine drive	-5,185	См. лист 31 See sheet 31

ПЕРЕЧЕНЬ ОБОРУДОВАНИЯ (ПРОДОЛЖЕНИЕ)
LIST OF EQUIPMENT (CONTINUATION)

№ п.п. No. of pos.	Маркировка Marking	Наименование Name	Отметка установки Installation elev.	Примечание Note
29	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Сепаратор шаровый Ball separator	-7,200	См. лист 32 See sheet 32
30	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Аппарат рециркуляции шаровый Ball recirculating slide	-7,200	См. лист 33 See sheet 33
31	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Фильтр сетчатый Debris filter	-7,200	См. лист 34 See sheet 34
32	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Насосная группа промывки Flushing pumps	-7,200	См. лист 35 See sheet 35
33	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Сепаратор шаровый Ball separator	-7,200	См. лист 36, 37 See sheet 36, 37
34	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Аппарат рециркуляции шаровый Ball recirculating slide	-4,100	См. лист 38 See sheet 38
35	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Фильтр сетчатый Debris filter	-7,200	См. лист 39 See sheet 39
36	СОЛС11А1001 СОЛС12А1001 СОЛС13А1001	Насосная группа промывки Flushing pumps	-7,200	См. лист 40 See sheet 40

Данный чертеж не подлежит размножению и передаче другим организациям и лицам без согласия АО "Атомэнергоспроект".
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Package Number 3.9.6.92
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R01.KK34.300MA.0.TM.OK.WD001
АЭС "КУДАНКУЛАМ" БЛОК
NPP "KUDANKULAM" UNIT

3

Изм. Кол. у.ч. Листы в папке Подпись Дата
Rev. of pos. Sheet Doc. No. Signature Date

Утвержден: [Signature] 2018
Approved: Rogachev

Н. Контр. [Signature]
N. Contr. Tsyu

Проект. [Signature]
Designed: Alekseev

Исполнитель: [Signature]
Executed: [Signature]

Специальные чертежи оборудования на отметках -7,200; -4,100
Special drawings of equipment at elevations -7,200; -4,100

План на отметках -7,200; -4,100
Plan view at elevations -7,200; -4,100

WD 2

JSC "Atomenergoproekt" Moscow 2019

Формат: A3

Cross sectional View of Turbine Building - Annexure-2

DPR

