"APPROVED"
Chief Power Energyman
LLC "SGCC"
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" 12 " 2021 y.

"O'zbekneftgaz" AJ
"Shurtan gaz kimyo majmuasi" MCHJ
MTRB xizmati
RO'YXATGA OLINDI
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Reg. № 074/_____

TECHNICAL ASSIGNMENT
for purchasing of the explosion-proof light fixture for production needs of LLC «Shurtan GCC»

2021 - SGCC

№	1. GENERAL INFORMATION		
1.1	**Name of the item of purchase**	The explosion-proof light fixture	
1.2	**Basis and purpose of purchasing equipment**	Plan of Measures from 19.04.2021 for Modernization and Technical Renewal of Electrical Equipment of "Shurtan GCC", LLC Facilities (reg. No. 034/16-M from 20.04.2021). This Technical assignment for the Purchase of The explosion-proof light fixture is used for the purchase of appropriate equipment to provide with lighting of process areas according to the lighting standards of "Shurtan GCC", LLC facilities (Further - Owner). Due to the moral and physical obsolescence of existing lighting equipment, existing lighting fixtures installed at the facilities will not be able to provide with the required lighting according to standards and norms.	
1. 3	**Requirements about newness (year of manufacture / release of equipment)**	The delivered product shall be new, produced not earlier than 2021 (which was not in use, which was not restored, and its consumer properties were not restored).	
1.4	**Development / manufacturing stages**	**Stage**	**Type of supporting document**
		Development by the Supplier of the manufacturer's Design Documentation Package (further - DDP) for the manufacture of light fixture.	Design Documentation Package. Confirmation and agreement with the customer of the parameters of the light fixture.
1.5	**Documents for development/production**	Regulatory and design documentation of the manufacturer. Present Technical assignment. Additional technical documentations shall be provided by the Customer upon Supplier's request.	
1.6	**HS code and other international codes if applicable**	According to the current normative technical documentation	
1.7	**Vendor Requirements**		
		The Supplier shall deliver quality goods from the manufacturer or its official representative (distributor) producing explosion-proof light fixture having at least five years' experience at the manufacture of similar equipment. The prospective supplier shall have experience at supplying explosion-proof equipment at gas processing and gas chemical plants (at least 5 similar equipment contracts in the last three years). The prospective supplier shall provide in his commercial proposal with the relevant information confirming compliance with the above requirement, including information on the technical characteristics of previously delivered explosion-proof light fixture. Reference list of previous Customers indicating the delivery date and details and contact details of buyers.	
	2. SCOPE OF APPLICATION		
2.1	The explosion-proof light fixture designed specifically for illuminate the gas processing process zones of "Shurtan GCC", LLC. The explosion-proof fixture are will be used for lighting of premises and industrial sites in explosive zones Zone 1 and Zone 2 according to GOST R 51330.9-99.		
	3. OPERATING CONDITIONS		
3.1	**General operating conditions**	Ambient temperature during operation from -45 °C to + 50 °C Category of climatic versions: UHL1 (УХЛ1) According to GOST 15150-69. Degree of protection from external influences - not lower than IP66;	
3.2	**Additional / Special requirements**	Certificates of compliance with the following standards: 2ExedIICT5 DIP A21 TA70 ° C 1ExdbembIICT5 GbX Compliance with EU standards: EN 60079-0, EN 60079-1, EN 61241, EN 60529 Compliance with GOST R: 51330.0-99, 51330.1-99 Certificates of conformity: INERIS 01 ATEX 0056X, POCC IT. GB05. V02539 Certificates of compliance: INERIS 01 ATEX 0056X, POCC IT.ГБ05.B02539	
3.3	**Requirements for equipment operating costs**	In accordance with the manufacturer's NTD. The Supplier shall provide in the DDP a list of consumables and spare parts required for two years of operation of the supplied equipment.	
	4. TECHNICAL REQUIREMENTS		
4.1	**Main technical requirements**	Type of mounting: Pole type/ suspended fixture on clamps. Cable core cross-sections: 3x (1.5-2.5) mm (L+N+PE) Number and type of cable entries: M25x1.5 The diameter of the supplied cable is 9-14 mm. Conditional passage fitting: 25 mm.. Rated voltage ~230AC Input voltage tolerance - ±10% Rated frequency, 50 Hz CCT, K:6500 Luminous flux pulsation factor: 1% Protection class against electric shock: I Light source efficiency of 120 Lm / W; Color rendering index ≥80-89 Ra (1B) Luminous flux of the light source: For 2x9 W -2160-2495 lm; For 2x18 W -4320-4980 lm;	
4.2	**Main technical, economic and operational indicators**	According to NTD	

4.3	**Reliability requirements**	- Specified no-failure operating time, h, not less than 100,000; - Specified service life until overhaul, not less than 5 years; - Full service life - not less than 25 years.
4.4	**Design requirements, Installation and technical requirements**	Type of mounting: suspended, with double fixture to the pipe of Ø 60 mm with stainless clamp (clamp shall be supplied in set). Interlocking switch in the light fixture housing, which disconnects the 220 V network when the protective cap is removed under voltage. The circuit breaker design must correspond to - ExedIICT5. The terminals used to connect the conductors must be Exe. Luminous intensity curve type: Semi-wide. The connection is made through a cable entry. Cable entries shall be stainless metal for armoured cable for wire and cable entry. The clear polycarbonate cap shall be closed tightly with metal clips. Case of light fixture made of impact-resistant antistatic polyester reinforced with long fibres of glass fibre, with transparent polycarbonate cap, which is fixed by clamps made of stainless steel. For convenience and time saving for replacement of light fixture, the translucent panel of the explosion-proof light fixture must be fixed with latches.
4. 5	**Material requirements**	Material for case manufacture is a black polyester reinforced with glass fiber. Light source – is LED lamp with two-pin (bi-pin) base of Ex design. The light source shall be protected by a transparent cap made of high strength monolithic polycarbonate (polycarbonate thickness is not less than 7 mm). The light transmittance of the polycarbonate protective cap shall be at least 98% of the source illumination. Illuminator reflector made of anodized aluminum. Seals between the cover and the housing shall provide with protection on demand for the entire service life of the light fixture.
4.6	**Requirements for stability and parameters under the influence of environmental factors**	Requirements for Stability and Parameters under the Influence of Environmental Factors. Light fixture shall have the form of explosion protection - "explosion-proof casing" as per GOST R 51330.1-99 (IEC 60079-1-98); explosion protection level - "explosion-proof electrical equipment" with their design in accordance with the requirements of GOST R 51330.0-99 (IEC 60079-0-98). The light fixture shall be provided with Increased protection of "e" type. Environmental factors should not affect parameters. Light fixture used in manufacturing shall be super bright and its service life shall not be less than 100,000 hours. The light transmittance of a transparent protective cap made of monolithic polycarbonate shall not be lost when exposed to an external environment below 90% for the entire service life. Explosion-proof light fixture shall be resistant to constant exposure to aggressive media, including hydrogen sulfide vapors, chemically resistant to operating media and resistant to UV radiation.
4.7	**Power supply requirements / Power supply requirementsr:**	~ 230 V, 50 Hz, ± 10%. Power Factor (cos φ): 0.95 Compliance with the standard ISO 50001: 2018
4.8	**Requirements for control and measurement devices and automation**	According to the manufacturer's technical technical conditions.
4.9	**Requirements for components, initial and operational raw materials, as well as finished products**	Fixing the clamps to the lamp body should be on M8 bolts Distances between mounting bolts of M8 type clamps: - 400 mm for light fixture of 2x9 W; - 450 mm for light fixture of 2x18 W; Lamp dimensions shall be in accordance with the standard for lamp T8 with base G13. - 1200 mm for 18 W; - 600 mm for 9 W; - Start-up equipment shall be explosion-proof.
4.10	**Marking requirements**	Marking shall comply with the requirements of the state standards of the Republic of Uzbekistan and consistent, not inferior to international generally accepted standards. The marking of the goods shall contain the decrypted name of the equipment, the name of the manufacturer, the address of the manufacturer's location and the date of issue. Type of explosion protection, degree of protection as per IP. Marking shall include: - Name of the manufacturer or its registered trademark; - Designation of electrical equipment type; - Serial number according to the numbering system of the manufacturer, - Name or mark of certification body and certificate number;
4.11	**Requirements for dimensions and packaging**	Equipment and packaging shall be marked in accordance with regulatory documents. The Supplier shall ensure availability of information about the equipment in the state language of the Customer and in Russian in the open and easily accessible places. The packaging shall ensure the safety of the goods during transportation, loading and unloading operations and movement of the goods to the place of their installation. Packaging shall comply with the requirements of state standards of the Republic of Uzbekistan and international generally accepted standards. Packaging shall be strictly consistent with the marking of the goods. Equipment damaged during transportation shall be replaced with a new one at the Supplier's expense on the basis of the certificate issued by the Customer. Requirements for the dimensions, packaging, shipment of goods must comply with GOST for packaging and shipment and ensure safe and reliable delivery of goods to the destination. Transportation of packaged Equipment is performed by any type of transport that protects the products from exposure to solar radiation, sudden temperature surges, atmospheric precipitation and dust with observance of precautions against mechanical impacts.

		Loading, attachment and transportation of Equipment in vehicles shall be carried out in accordance with the current rules of cargo transportation, taking into account manipulation marks of container marking as per GOST 14192-96. The equipment shall be supplied in non-refundable packaging as one transport unit.
4.12	**Requirements for SPTA and quick-wearing parts**	SPTA package shall ensure operation for two years taking into account consumption norms and availability of quick-wearing parts in the design (with indication of name and quantity in the technical proposal).
	5. REQUIREMENTS FOR THE DELIVERY AND ACCEPTANCE RULES	
5.1	**The procedure for delivery and acceptance**	Explosion-proof light fixture shall be tested in functional-assembled form on the test equipment of the manufacturer. On-site tests shall be carried out at least 72 hours. The Supplier shall inform the Customer about the readiness of the goods two weeks prior to the expected shipment date and send a notice about the beginning of shipment of the goods. Acceptance of the goods is carried out on the territory of the customer.
5.2	**Requirements for transmitting technical and other documents to the customer when delivering equipment**	The Customer shall be provided with the product documentation in Russian or with translation into Russian consisting of: - Certificates for explosion-proof light fixture; - Installation and adjustment instructions of the unit; - Electrical connection diagrams; - Certificates for explosion-proof light fixture; - Specifications and statements of equipment and materials with dimension drawings and other technical characteristics; - Power supply and protective grounding diagrams; - Operation, Maintenance and Repair Manuals of the unit; - Certificates on demand.
5.3	**Equipment insurance requirements**	The equipment shall be insured according to CIP delivery conditions.
	6. TRANSPORTATION REQUIREMENTS	
6.1	**Equipment transportation requirement**	According to GOST 23216 and GOST 14192. The Supplier shall deliver at its own expense. When transporting goods, take into account the weather conditions. Damage to the goods and deterioration of the quality of the goods associated with improper transportation is considered a case leading to non-acceptance of the goods.
	7. STORAGE REQUIREMENTS	
7.1	In accordance with the manufacturer's NTD. The period of equipment storage before commissioning is up to 12 months.	
	8. REQUIREMENTS FOR THE SCOPE AND/OR DURATION OF GUARANTEES	
	The warranty period for the goods is not less than 36 months from the moment of delivery or 24 months from the moment of commissioning. Warranty obligations apply to all goods and all components (or components). If during the warranty period the goods are defective or fail to comply with the terms of the contract, the Supplier (Seller) shall, at its own expense, within 30 days at the Customer's choice, eliminate the defects, or replace the defective goods with a new one of appropriate quality. The warranty period is re-calculated with respect to the corrected goods and delivered instead of the defective one. All requirements relating to the guarantee must be included in the sales contract.	
	9. REPAIRABILITY REQUIREMENTS	
	The structure and components of the explosion-proof light fixture shall be repairable. Similar components and their components shall be interchangeable, according to the service life.	
	10. SERVICE REQUIREMENTS	
10.1	**Service requirements**	According to the regulatory technical documentation.
10.2	**Post-delivery service requirements**	If the supplier is not the manufacturer of the supplied equipment, he shall provide documentary evidence of the manufacturer of the equipment for the supplier's authority to supply, technical, warranty and post-warranty maintenance of the equipment (contract or letter from the manufacturer). The supplier needs to have a service center in Uzbekistan for operational repair, with replacement of components during the warranty period.
	11. ENVIRONMENTAL AND SANITARY REQUIREMENTS	
	Environmental and sanitary requirements	The delivered goods shall comply with environmental and sanitary standards of the Republic of Uzbekistan and Construction Norms and Regulations. ISO 14001.
	12. SAFETY REQUIREMENTS	
	The equipment shall not create hazardous and harmful production factors and require the use of special means of personnel protection. The impact of harmful factors on employees shall not exceed the hygienic standards established by the relevant GOST, sanitary rules.	
	13. QUALITY AND CLASSIFICATION REQUIREMENTS	
	Quality and qualification requirements	The Supplier shall deliver quality goods from the manufacturer or its official representative (distributor). The quality of the goods shall be approved by the relevant international requirements and GOST.
	14. ADDITIONAL (OTHER) SERVICES REQUIREMENTS	
	The Customer shall be supplied with: A passport for the product in 1 copy; An operating manual in 1 copy; An instructions and passport of component equipment in 1 copy. SPTA list in 1 copy. Passport and certificates. The requirements of this Technical assignment shall be reflected in the supply contract and shall be considered an integral part of the supply contract.	
	15. REQUIREMENTS FOR QUANTITY, COMPLETING, LOCATION AND DELIVERY TIME (PERIODICITY)	
15.1	**Quantity, configuration, place and time (frequency) of delivery**	Quantity of explosion-proof light fixture to be purchased: 2x18 Watt - 2169 pieces; 2x9 Watt - 928 pieces.

		Components of explosion-proof light fixture shall comply with the technical assignment and factory configuration. The supply set shall include: 1) Set of spare parts for the warranty service life within the scope stipulated by the manufacturer's specification; 2) Set of technical and shipping documentation within the scope specified in subsection 5.2 of this TA. 3) Explosion-proof cable entries and fittings for light fixture. 4) 2x9 W and 18x2 W ultra-bright LED lamps for each light fixture. 5) Relevant explosion protection certificates.
	16. REQUIREMENT FOR RELATED SERVICES WHEN DELIVERING EQUIPMENT	
16.1	**Requirements for the implementation of project documentation**	Required
16.2	**Installation supervision requirements**	Not required
16.3	**Pre-commissioning requirements**	Not required
16.4	**Training requirements for the customer's personnel**	Not required
16.5	**Other related services**	Not required
	17. REQUIREMENT FOR THE FORM OF INFORMATION TO BE SUBMITTED	
	The documentation must be in the official language and duplicated in Russian and English, on paper, be the original (have blue signatures and seals) priority Russian language; On electronic media (USB HDD) provide: Documentation must be transferred to the Customer together with the equipment.	
	18. LIST OF ACCEPTED ABBREVIATIONS	
	Abbreviation	**Explanation of the abbreviation**
	NTD	Normative and technical documentation
	SanPiN	Sanitary regulations and norms
	19. LIST OF APPENDICES	
	App Name	**Page Number**

**Note: The developer is responsible for the correctness of filling in and not filling in the item.*

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