



Specification No. ED.NI.UKC.F.TC.4.3 dd 13.01.2023  
for the supply of a formwork system  
for “Construction of Foundation of Tower Crane No. 4.3 (40UKC)”  
EL DABAA NPP

Subject of Procurement:  
Formwork System for Construction of Foundation of Tower Crane No. 4.3 (40UKC)  
EL DABAA NPP

## SECTION 1. Scope of Application

In accordance with the Appendix in Section 8, the formwork system set will be used for construction and installation works during the construction of the foundation of the tower crane No. 4.3 (40UKC).

## SECTION 2. Reliability Requirements

The design of the formwork shall ensure the following:

- strength, rigidity and stability of geometrical shape and dimensions under the influence of installation loads, static loads from the weight of concrete and reinforcement as well as transport and process loads;
- the designed accuracy of geometric dimensions of the monolithic structure and a specified quality of its surfaces, depending on the formwork class;
- the maximum number of turnover cycles and the minimum cost per turn;
- the minimum adhesion to set concrete;
- the minimum number of type and size of building elements, depending on the nature of the monolithic structure;
- a possibility of unloading structures of any complexity and at any height;
- a possibility of pre-assembly and reconfiguration (changes in dimensions or configuration) in the conditions of the construction site;
- the provision of access for workers to the structures at any height;
- the manufacturability during fabrication and the possibility to apply mechanisation and automation during installation;
- fast dismountability of connecting pieces;
- minimization of material, labour and energy costs during installation and dismantling;
- convenience of repairs and replacement of elements that went out of service;
- tightness of the formlinings;
- temperature and humidity conditions necessary for the concrete to harden and achieve its design strength;
- chemical neutrality of the formlinings to the concrete mixture;
- fast installation and dismantling of the formwork without damaging the monolithic structures and formwork elements.

## SECTION 3. Service Requirements

The Supplier of the formwork system shall provide:

- engineering support in the form of formwork panel-by-panel deployment with the issuance of schemes according to the drawings submitted by the Customer for a period of two years from the date of delivery of the formwork;
- an on-site technician upon the Customer's request, within 10 business days of the date of the request, for consultation on the possibility of use of the formwork for concreting of similar structures and the interchangeability of formwork parts and components.
- a possibility of organizing a theoretical and practical training in work with the formwork for the organization's employees who work with the formwork. At the end of the training course, a standard certificate will be issued. These services must be included in the total bid price.

#### SECTION 4. Safety Requirements

The connecting (fixing) pieces of all types of formwork shall have devices, which prevent spontaneous opening, loosening, disconnection during concreting and other process influencing on the formwork, and maintain the overall rigidity of the structure.

The design of the formwork shall provide fall protection in the form of safety barriers. The safety barriers shall be along the entire length of the outside of the service platform.

#### SECTION 5. Supply and Delivery Requirements

Delivery time shall be in accordance with the agreement between the parties, agreed in advance with the Customer's Directorate for Preparation of Construction Operations.

The formwork shall be delivered in full, according to the initial data specified in this specification.

The Supplier shall deliver the Goods using its own resources and at its own expense to: Dabaa Nuclear Power Plant, El Dabaa, Matrouh Governorate 5006201, Egypt

#### SECTION 6. Requirements For The Form Of Information Provided

All information provided shall be in English, Russian.

The formwork set shall be supplied with the following operational documents:

- a formwork certificate;
- operation manual (with installation diagrams and permissible loads);
- formwork system certificates;
- layout drawings (plans, cuts, views);
- a generic specification for all goods supplied with a graphic representation of elements.

#### SECTION 7. Additional Requirements

The perimeter (m<sup>2</sup>) to be formed with formwork must be included in the as-built drawing (assembly drawing) of the proposal.

The formwork system shall be panel framed.

The Tower Crane No. 4.3 (40UKC) has the following dimensions:

Length: 9000 mm

Width: 9000 mm

Height: 2200 mm

The monolithic base shall be concreted with concrete (B45 W8 concrete grade).

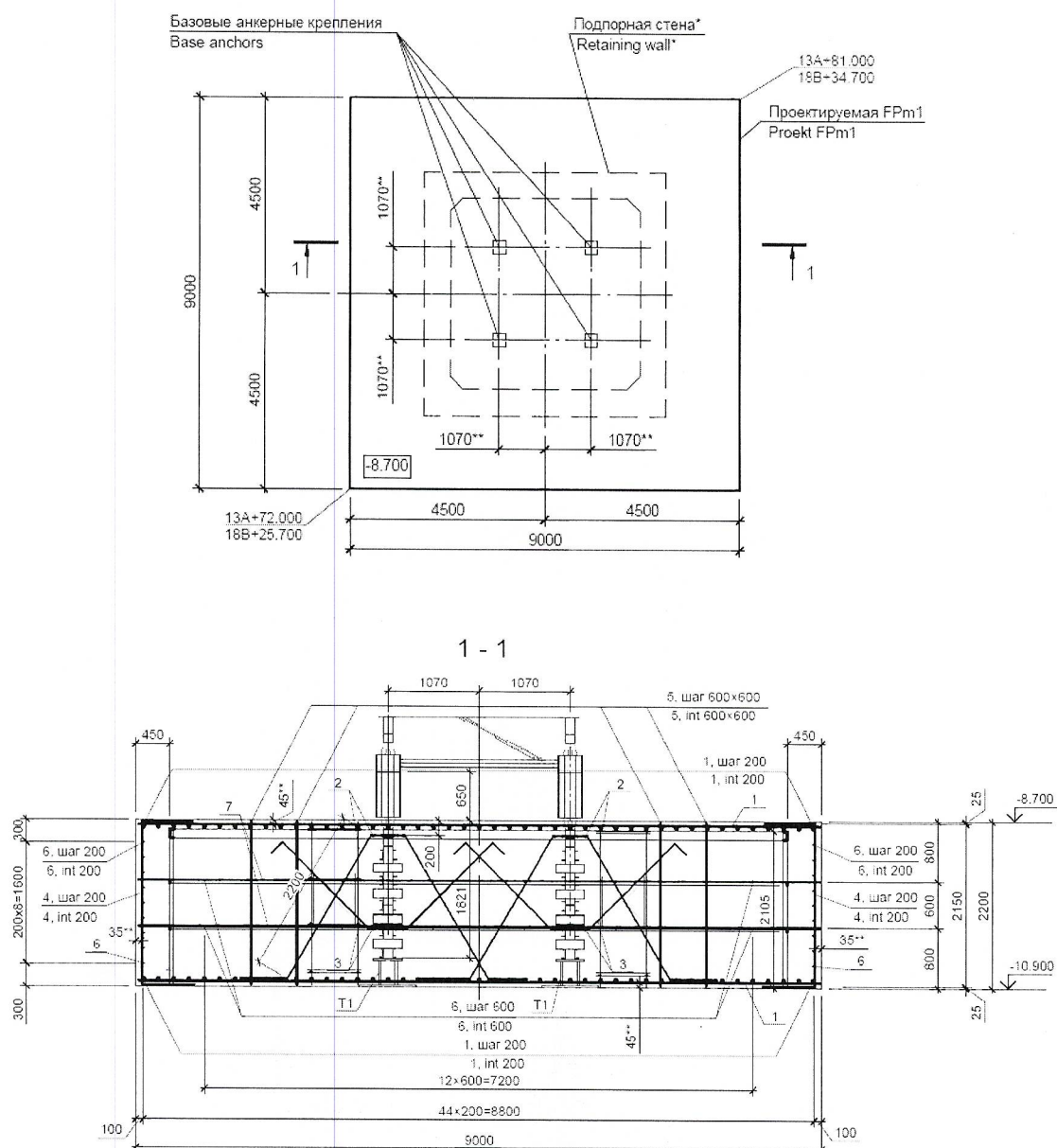
Concrete volume: 244.56 m<sup>3</sup>.

One of the formwork panel sizes shall be 3000 mm, for the subsequent use of the formwork for concreting walls.

Technical questions shall be referred to the Directorate for Preparation of Construction Operations.

## SECTION 8. List of Appendices

No.	Document Name	Document Designation	Total Sheets
1	Tower Crane No. 4.3 (40UKC). Foundation	Similar to the code ED.D.P032.3.0UJG&&&&&&&.012.DC.0001.S_C01 (Tower Crane No. 3.1 (30UJG). Foundation).	13







**APPROVAL SHEET**

Specification No. ED.NI.UJG.F.TC.4.3 dd 13.01.2022 for the supply of a formwork system for "Construction of Foundation of Tower Crane No. 4.3 (40UKC)"

EL DABAA NPP

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