Tender Document

MR 147/2017 - Supply, Install and Commission Compressor Unit System for Start Up Air of Generator for Labasa Power Station

Fiji Electricity Authority
Generation
24-May-17

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2 Specification

2.1 General Information

The function of the compressor unit is to compress and maintain the air start at 300psi. This Air start system is for starting Ruston RK270s' unit via their air turbine unit. The system comprises of a main air bottle volume approx. 1.26m^3 connected in serial with the 2 Ruston unit handing each individual bottles.

Air Compression units should operate within a tolerance of ~50 psi for maintain the desire pressure. The Unit should incorporate one primary, one standby compressor unit and third diesel blackstart compressor. The current setup is shown in the Figure below.

Figure 1 Current Setup

2.2 System Specification

2.2.1 Compressor Unit

The compressor unit compresses of three units; two electrical & one diesel driven compress. This must be link to a common control system governing the three. Below are the specifications of desired compress;

Compression:	Approx. 500 PSIG
Flow Rate:	>25 CFM
Power:	Approx. 10HP

Specification similar to Ingersoll rand 7T2 compressor unit (Current Unit).

2.2.2 Control Panel

The function of the control panel will be to govern the sequence of operation of the 3 compressors. It should operate the compressor to achieve and maintain the desire pressure (300psi) which is governed by pressure switches maintain. This should operate with accordance to the mode of operation, running hour or black-start procedure.

The third compressor unit (the Blackstart Unit) must be power by diesel rather than an electrical motor for blackstart purposes during station blackouts. This backup compressor operates only if the two primary sets failure.

2.2.3 Protection

Protection must be built in the controls, following the not limited to protection must be integral into the system;

- High Pressure
- High Temperature
- High Load
- Compressor protection

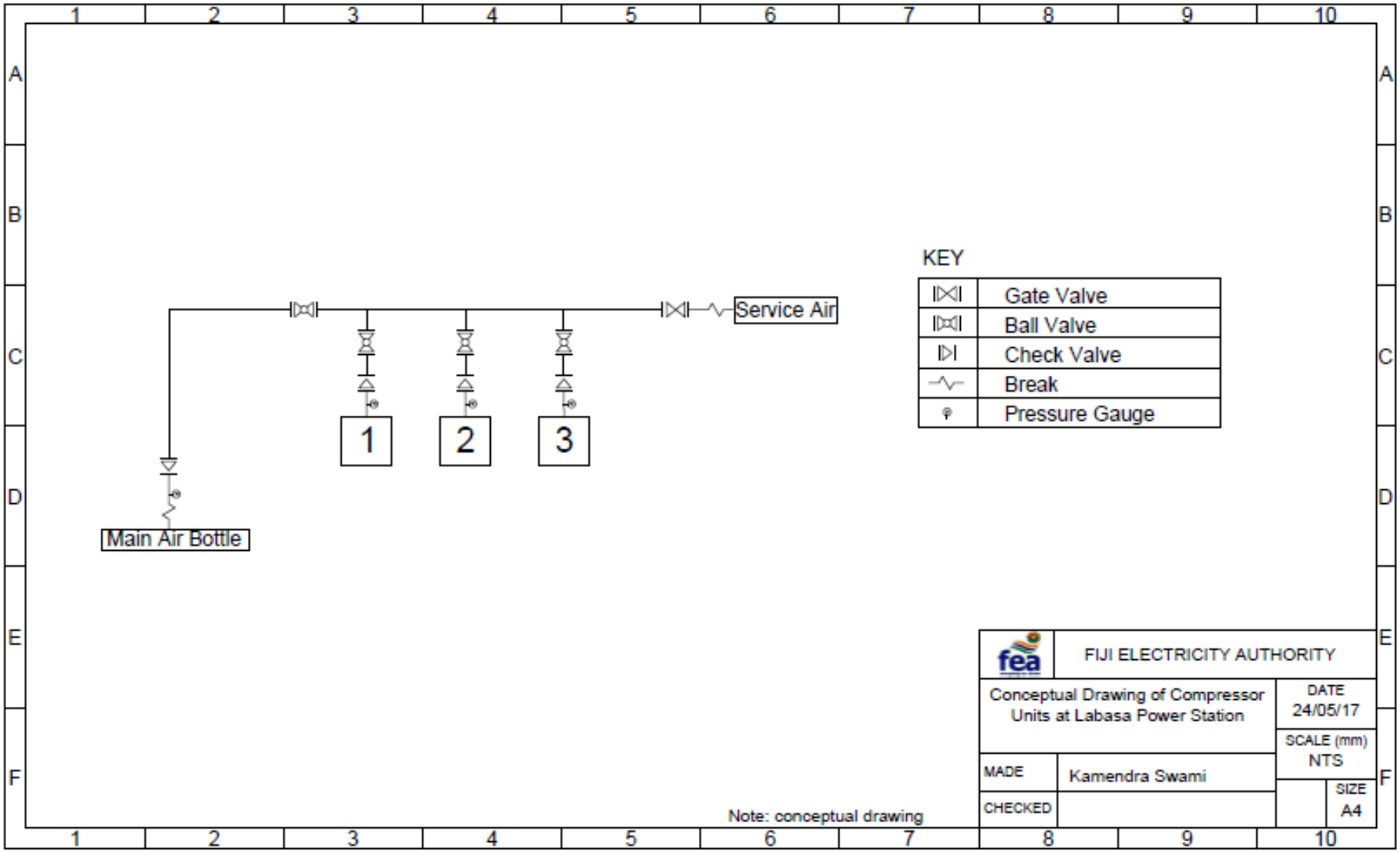
This system should also incorporate pressure relief system for situations where the output pressure excess recommended.

2.2.4 Mode of Operation

Option must be provided to switch between mode of operation:

1. Manual – Operator manually control the units and switch between them
2. Auto – Operation is governed by the PLC/controller
3. OFF – Isolates unit from operation

2.3 Design PI&D schematic drawing



3 Scope of Works

1. Design an air compression system that automatic fill the Generator Air start system, (Air Bottles) to and maintain at 300psi
2. Supply & Install the compressor unit with a standardized control unit to link, govern and automate the system. (All cartage must be handled by the contractor)
3. Install all air pipes including supply and install of all standard air fitting, valve & accessories up to the Main Air Bottle.
4. Program Compressor units' control system and integral it into station system automating the start and stop with pressure, Voltage and Current monitoring. This should include all the protection and alarm indication.
5. Commission the system with the desired setting. Program for remote monitoring from the station control panel.
6. Provide operational and maintenance training of the new system
7. Provide two copy of the following manual for system;
    - O&M manual
    - Parts manual
    - Literature manual
8. Provide a copy of the PLC program for review and maintenance purpose.

4 Price Schedule

MR 147/2017 - Supply, Install and Commission Compressor Unit System for Start Up Air of Generator for Labasa Power Station

Item	Item Description	Unit Price	Total Price Currency: _____
1	Supply and Install the Compressor Units and all connection to the main Air bottle include all fitting and valve arrangement.		
2	Program Compressor units' control system and integral it into station system automating the start and stop with Pressure, Voltage and Current Instrumentation.		
3	Test and Commission the Compressor Units		
4	Supply of 3 x of each; • O&M manual • Parts manual • Literature manual		
5	Supply of Operational Critical parts		
6	Accommodation & Mobilization to Site		
7	Transportation of Materials to Site		
	TOTAL (VEP)		
	VAT 9%		
	TOTAL (VIP)		

Notes:

1. Ensure site HSE rules are followed at all times.
2. Contractor to verify all drawing measurements onsite
3. All Sub-contractors to be used for any part of the works are to be declared.
4. Contractor shall provide all materials, tools equipment and labour necessary to perform works.
5. A detailed work plan to be provided with expected date for the works.
6. FEA financial terms are applicable for these works. Any advance payment will require a bank guarantee.

Tender Submission - Instruction to bidders

It is mandatory for Bidders to upload a copy of their bid in the **TENDER LINK** Electronic Tender Box no later than **4:00pm, on Wednesday 19th July, 2017**

To register your interest and tender a response, view 'Current Tenders' at:
https://www.tenderlink.com/fea

For further information contact The Secretary Tender Committee, by e-mail
TDelairewa@fea.com.fj

In additional, hard copies of the tender, one original and one copy must be deposited in the tender box located at the FEA Head Office, 2 Marlow Street, Suva, Fiji no later than **4:00pm, on Wednesday 19th July, 2017-** Addressed as

Tender – MR 147/2017 – Supply, Installation and Commissioning of Compressor Unit System for Start Up Air for Generator at FEA's Labasa Power Station.

The Secretary Tender Committee
Fiji Electricity Authority
Head Office
Suva
Fiji

- **Hard copies of the Tender bid will also be accepted after the closing date and time provided a soft copy is uploaded in the e-Tender Box and it is dispatched before the closing date and time.**

Tenders received after **4:00pm** on the closing date of **Wednesday 19th July, 2017**

- will not be considered.
- Lowest bid will not necessarily be accepted as successful bid.
- **It is the responsibility of the bidder to pay courier chargers and all other cost associated with the delivery of the hard copy of the Tender submission including any Duties/Taxes. Hard copies of the Tender submission via Post Box will not be considered.**