



MR 205-2022

**TECHNICAL SPECIFICATION
FOR SUPPLY OF
150mm GRADE C GALVANIZED PIPE
AND
200mm SEAMLESS CARBON STEEL PIPE**

ENERGY FIJI LIMITED

Revision History & Document Control

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1	Draft - Issued for Review	Rajiv Singh		03/08/22
2	Reviewed		Shavnil Chand (CEW)	04/08/22
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1.0 INTRODUCTION

Energy Fiji Limited [EFL] is responsible for generation, transmission and distribution of electricity in Viti Levu, Vanua Levu, Ovalau and Taveuni in Fiji. By the end of 2021, EFL had 210,831 customers. This includes residential, commercial and institutional customers.

This document outlines the technical requirements for 150mm grade C galvanized pipe and 200mm seamless carbon steel pipe for use in EFL’s project works at Naikabula Substation.

The items covered by this specification are listed below:

No.	Items Description	Quantity
1	150mm Grade C Galvanized Steel Pipe with socket	20
2	200mm SEAMLESS CARBON STEEL PIPE	4

Table 1.1: Items Covered Under this Specification

This Specification covers the general requirements for supply and delivery of 150mm grade C galvanized pipe and 200mm seamless carbon steel pipe for use in EFL’s project works at Naikabula Substation in Lautoka.

2.0 REFERENCES

The item shall be designed, manufactured and tested in accordance with the latest edition of the Standards specified below and all amendments issued prior to the date of closing of tenders except where varied by this specification.

AS/NZS 1163	Cold-formed structural steel hollow sections
AS 1345	Identification of the contents of pipes, conduits and ducts
AS/NZS 2053	Fittings for electrical installations
AS 1214	Hot-dip galvanized coatings on threaded fasteners
AS/NZS 4680	Hot-dipped galvanized (zinc) coatings on fabricated ferrous articles
AS/NZS 2312	Guide to the protection of iron and steel against exterior atmospheric corrosion
AS/NZS ISO:9001	Quality Management Systems - model for quality assurance in design, development, production, installation and servicing
ISO 45001	Occupational health and safety management systems - Requirements with guidance for use

Should inconsistencies be identified between standards and/or this specification, the tenderer shall immediately refer such inconsistencies to the EFL for resolution.

3.0 SYSTEM CONDITIONS

3.1 Environmental Conditions

The items shall be suitable for installation outdoors and shall be designed to withstand the following service conditions.

Description		Conditions
Atmosphere Pollution Level	:	Very heavy (IEC 60815)
Ambient Temperature	:	Peak: 40°C 24 Hour Average: 30°C Annual Average: 22°C Minimum: 10°C
Relative Humidity (Average)	:	85%
Rainfall	:	Annual Average: 2663mm
Isokeraunic (Thunder day) level	:	60 thunder days per year
Seismic	:	To a maximum of 7 on the open-ended Richter Scale

Note: Fiji is situated in a region where cyclones are experienced frequently. All plant and equipment shall be designed and constructed to withstand these extreme conditions. Equipment may be installed in coastal environments and in conditions where special protection measures against corrosion will be required. Bidders are required to provide details of such protective measures for protection against corrosion.

3.2 Service Conditions

Nominal Voltage	240V/ 415V	11kV	33kV
System Highest Voltage	660V	12kV	36kV
System Frequency	50Hz	50Hz	50Hz
Number of Phases	1 or 3	3	3
System Earthing	Effectively Earthed	Effectively Earthed	Solidly earthed, or low-impedance earthed
Impulse Withstand Voltage (peak)		28kV	70kV
Power Frequency Withstand Voltage (rms)	AC 10kV rms	95kV	200kV

4.0 DESIGN AND CONSTRUCTION

4.1 150mm Grade C Galvanized Pipe

The pipe offered shall be made to AS/NZS 1163 and shall be of grade C with the following dimensions:

Description	Requirements
Nominal Length	6m
Inside Diameter	150mm
Outside diameter	165.1mm
Grade/Class	C
Thickness	5.4mm
Socket	One

The pipes shall be fit for use under the environmental conditions as stipulated above in clause 3.1.

The corrosion protection offered shall be as per AS/NZS 2312.

4.2 200mm Seamless Carbon Steel Pipe

The pipe offered shall be made to AS/NZS 1163 and shall be of seamless carbon steel material with the following dimensions:

Description	Requirements
Nominal Length	6m
Inside Diameter	200mm
Outside diameter	219.1mm
Thickness	8.18mm

The pipes shall be fit for use under the environmental conditions as stipulated above in clause 3.1.

The corrosion protection offered shall be as per AS/NZS 2312.

5.0 PERFORMANCE AND TESTING

5.1 Type Testing

The type test certificates are to be submitted with the offer with the relevant tests conducted.

5.2 Routine Testing

Routine tests are intended to eliminate defective units and shall be carried out during the manufacture of cables.

Routine testing in accordance with relevant standards shall be conducted and copies of sample routine test reports of each product offered shall be submitted with the offer.

6.0 RELIABILITY

6.1 Service Life

Bidders are required to comment on the reliability of the product and the performance of the materials offered for a service life of 50 years under the specified system and environmental conditions in clause 3.

7.0 ENVIRONMENTAL/ HSE CONSIDERATIONS

Suppliers are required to comment on the environmental soundness of the design and the materials used in the manufacture of the items offered. In particular, comments should address such issues as recyclability and disposal at end of service life and also disposal of packaging material.

Bidders are required to provide the Material Safety Datasheet (MSDS) of the product.

8.0 DELIVERY

The pipes shall be delivered to EFL's Navutu Depot.

9.0 QUALITY SYSTEM REQUIREMENTS

Bidders are required to submit evidence that the design, manufacture and testing of the pipes are in accordance with ISO 9001 and accredited inspection and testing methodologies.

10.0 OCCUPATIONAL HEALTH AND SAFETY SYSTEMS

Tenderers are required to submit copies of certification to occupational health and safety management system, such as AS 4801 or to equivalent international standard ISO 45001. Such information is deemed mandatory bid submission and lack of it will result in disqualification of bid.

In addition to this, Bidders also need to submit health and safety plans implemented in factories for design, manufacture and testing of items, which will be used in this project.

11.0 PRODUCT WARRANTY PERIOD

The bidders are required to provide the warranty period as part of the proposal. A minimum warranty period of twenty-four (24) months from time of dispatch from factory shall be provided.

12.0 INFORMATION TO BE SUPPLIED BY THE BIDDER

12.1 Documentation to be supplied with the tender

To enable the EFL to fully evaluate the items offered, (in addition to the completed Specification Requirement and Guaranteed Performance schedule) the bidder shall submit the following information with their tender:

- Complete dimensional drawings of the items provided PDF format
- Product datasheet
- Evidence of Quality Management Systems used in the manufacturing process

Bidders may be asked to provide additional information during tender assessment period or following award of contract.

12.2 Samples

When requested, production samples of each item shall be submitted with the offer.

Each sample shall be delivered freight free (Delivery Duty Paid (DDP)), suitably packaged and labelled with the following information:

- Name of supplier and this contact number
- Tender number
- Any supporting data on features or characteristics

13.0 APPENDIX

13.1 Price Schedule

Bidders are required to complete the following price schedule and submit with the offer. EFL requires the bidding prices to be in CIF incoterms.

No.	Items Description	Quantity	Currency of Bid	Unit Price
1	150mm Grade C Galvanized Steel Pipe with socket	20		
2	200mm Seamless carbon steel Pipe	4		

13.2 Technical Schedule and Guaranteed Performance

The following schedule shall be completed and submitted with the offer.

No.	Particulars	Requirements		150mm Grade C Galvanized Pipe	200mm Seamless Carbon Steel Pipe
		150mm	200mm		
1	Manufacture address				
2	Country of manufacture				
3	Nominal Length	6m	6m		
4	Inside Diameter	150mm	200mm		
5	Outside diameter	165.1mm	219.1mm		
6	Grade/Class	C	-		
7	Thickness	5.4mm	8.18mm		
8	Lead time of delivery	Immediately after award of tender			

TENDER CHECKLIST

The Bidders must ensure that the details and documentation mention below must be submitted as part of their tender Bid

Tender Number _____

Tender Name _____

1. Full Company / Business Name: _____

(Attach copy of Registration Certificate)

2. Director/Owner(s): _____

3. Postal Address: _____

4. Phone Contact: _____

5. Fax Number: _____

6. Email address: _____

7. Office Location: _____

8. TIN Number: _____

(Attach copy of the VAT/TIN Registration Certificate - Local Bidders Only (Mandatory))

9. FNPF Employer Registration Number: _____ **(For Local Bidders only) (Mandatory)**

10. **Provide a copy of Valid FNPF Compliance Certificate (Mandatory- Local Bidders only)**

11. **Provide a copy of Valid FRCS (Tax) Compliance Certificate (Mandatory Local Bidders only)**

12. **Provide a copy of Valid FNU Compliance Certificate (Mandatory Local Bidders only)**

13. Contact Person: _____

I declare that all the above information is correct.

Name: _____

Position: _____

Sign: _____

Date: _____

Tender submission

Bidders are requested to upload electronic copies via Tender Link by registering their interest at: <https://www.tenderlink.com/efl>

EFL will not accept any hard copy submission to be dropped in the tender box at EFL Head Office in Suva.

This tender closes at 4.00pm (1600hrs) on Wednesday 10th August, 2022.

For further information or clarification please contact our Supply Chain Office on phone (+679) 3224360 or (+679) 9992400 or email us on tenders@efl.com.fj

The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act. Bidders are to clearly state the percentage of VAT that is applicable to the bid prices.

The lowest bid will not necessarily be accepted as the successful bid.

The Tender Bids particularly the “Price” must be typed and not hand written.

Any request for the extension of the closing date must be addressed to EFL in writing three (3) working days prior to the tender closing date.

Tender Submission via email or fax will not be accepted.