

مركز الكفاءة
National Grid

FROM: Standards & Specifications Department
Grandis Center, Tower A/2, 11th Floor, Riyadh

TO: Electrical Relays Factory Co.
P.O. Box 101709, Riyadh

DATE: 09.11.2015

Subject: Procurement of Electrical Relays Factory Co. (ERFC) Riyadh for Relay and Control Panels, Specs. # 31-TMS-01 Rev.04

Attachment: Mr. Taim M. Al-Muhamdi, ERFC General Manager

Extended Warranty: Ten (10) years Extended Warranty shall be applicable for the Relay and Control Panels to be supplied to SEC-National Grid SA as per contract through Letter # NA dated 02.08.2014.

This Manufacturer is technically prequalified to participate in any bidding for the supply of the above mentioned product to SEC-National Grid SA. This should not be interpreted as an approval of any specific products from this manufacturer. Prospective products from this manufacturer will be evaluated and will only be considered technically acceptable if they meet the prequalification specification and test requirements of SEC-National Grid SA.

If you need further clarification, please contact Division Manager, SASD/PASD at phone # 011 677530 or fax: Dabak at phone # 011 677462.

Eng. Suhail M. Al-Ouseiri
Supplies Manager, SASD

CC: Division Manager, SASD/PASD
Pre-qualification File

GERMAN CERT
Quality Management System Certificate

Electrical Relays Factory Co.

located at
P.O. Box 101709, Riyadh 11665, Saudi Arabia

German Cert Co. Ltd. hereby certifies that the quality management system of the above-mentioned has been evaluated and found to be in line with the requirements of the following standard:

ISO 9001:2008

For the scope of:
Manufacture, Assembly, Installation, Testing and Commissioning of Auxiliary AC/DC Panels up to 6300 A, Relay & Control Panels up to 132 KV, Package Substations and Medium Voltage Switchgear up to 33KV

Certificate Number: KorQ153697

This Certificate is valid from January 13, 2015 until January 12, 2018

Initial certification date: January 13, 2015
QC next issue date: January 13, 2015
Certification valid until: January 12, 2018

Dr. A. W. K. Al-Jarrah
Business Manager

IAF, DAKKS, ISO 9001



Introduction

Electrical Relays Factory Company (ERFC) is a **SEC/NG-SA Prequalified Company** and 100% wholly owned Saudi Company, Specialist for manufacturing Electric Panel Boards, Auxiliary AC/DC Panels, Relay and Control Panels, Medium Voltage Switchgear and Package Substations. The company name before was Electrical Relays Specialist Factory for Panel Board and was changed later to Electrical Relays Factory Company (ERFC), IT have paid up Capital of 2,750,000/-S.R. Electrical Relays Factory Company (ERFC) is one of the leading electrical Distribution Panel Boards and M.V. Substations manufacturer in the Kingdom of Saudi Arabia. ERFC was established in 2004 and our ISO Certificate 9002:2008 is issued to us in 2014 under Certificate Number: KorQ-153697 by German Cert Co., Ltd. ERFC products is manufactured upon the advanced modern technology to withstand several environmental conditions in Saudi Arabian. ERFC manufacture Package Substations for Power Transmissions and for Lighting and also all size of Low Voltage and Medium Voltage Distribution Boards, and also small boxes for control and for communications works. ERFC is equipped with all latest technology machineries such as CNC machines and Laser Machine for cutting and ERFC have a complete hydraulic system for sheet cutting, bending, punching and bus bars cutting and bending and punching and also equipped with complete set of painting equipment such as powder coating, spray painting. Control systems are achieved through latest software in computers and we have highly skilled engineers and technicians with huge experience in manufacturing panel boards.

NO	REMARK / COMMENT	REVISION / CORRECTIVE ACTION	DATE	STATUS	REMARKS
1	REVISION 1	REVISION 1	13/01/2015	OPEN	REVISION 1
2	REVISION 2	REVISION 2	13/01/2015	OPEN	REVISION 2
3	REVISION 3	REVISION 3	13/01/2015	OPEN	REVISION 3
4	REVISION 4	REVISION 4	13/01/2015	OPEN	REVISION 4
5	REVISION 5	REVISION 5	13/01/2015	OPEN	REVISION 5
6	REVISION 6	REVISION 6	13/01/2015	OPEN	REVISION 6
7	REVISION 7	REVISION 7	13/01/2015	OPEN	REVISION 7
8	REVISION 8	REVISION 8	13/01/2015	OPEN	REVISION 8
9	REVISION 9	REVISION 9	13/01/2015	OPEN	REVISION 9
10	REVISION 10	REVISION 10	13/01/2015	OPEN	REVISION 10

SGS INSPECTION REPORT

SGS Inspection Services Saudi Arabia Ltd.
P.O. Box 6102, Dammam 31462
Rajab Bin Aun Road, Dammam
Tel: +966 11 4750000 Fax: +966 11 4759999

Project: Project Ref. No.: N/A
Order Ref. No.: For our customer order ref. no.

Customer/Contractor: Electrical Relays Factory Co. (ERFC)
Address: Riyadh

Supplier / Manufacturer: Electrical Relays Factory Co. (ERFC)
Address: Saudi Arabia

Executing SGS data: SGS - Jubail
SGS office: SGS Inspection Services Saudi Arabia Ltd.

Place of Inspection: High Voltage Laboratory,
King Fahd University,
Riyadh
KSA

Inspection Date: 12.Oct.2015

Inspection scope: Visual & witnessing inspection for verification of degree of protection (IP 41) provided by the enclosure against solid foreign object of 1.0mm diameter and greater (IP 40) & protection against vertically falling water drops (IP X1).
Review Documentation

Item	Item/Tag No.	Quantity	Description	Results
	Sample Test 1	1 unit	Relay & Control Panel	Accepted
Personnel on Site:	Name	Company	Function	
	Antonio Reyes Jr.	SGS	TP1	PAS/ASD
	Engr. Akhmed N. Al-Farouq	SEC-National Grid SA	SA/SD	PAS/ASD
	Engr. Akhmed N. Al-Farouq	SEC-National Grid SA	SA/SD	PAS/ASD
	Engr. Akhmed H. Al-Muhamdi	SEC-National Grid SA	SA/SD	PAS/ASD
	Engr. Andy J. Carney	SEC-National Grid SA	SA/SD	PAS/ASD
	Engr. Sultan B. Al-Washied	SEC-National Grid SA	TSD/MSD	
	Engr. Muhammad I. Man	SEC-National Grid SA	TSD/MSD	
	Dr. Yusef Al-Farouq	King Fahd University	Associate Professor	
	Engr. Nasser Fahad Ward	ERFC	Production Manager	
	Engr. M. Gorman	ERFC	Gen. Manager	
	Engr. Taim Mousour Al-Jarrah	ERFC	Gen. Manager	

Inspection result: Verification of degree of protection (IP 41) test on the sample test panel was successful satisfactorily as per the inspection scope, approved TP1 (HW, ARMS030-2015) & relevant standards of IEC 6029 & 31-TMS-01 Rev.04.

Inspector: Antonio Reyes Jr. - SGS-Jubail Date: 12.Oct.2015

1. Material/Equipment detailed
Quoted presented for inspection:
- Sample Test Panel (Relay & Control Panel), 1 unit

Member of the SGS Group (Should Declare as Non-member) Page 1 of 7

King Fahd University
College of Engineering - Department of Electrical Engineering
High Voltage Laboratory

مركز الكفاءة
معمل الجهد العالي
معمل الجهد العالي

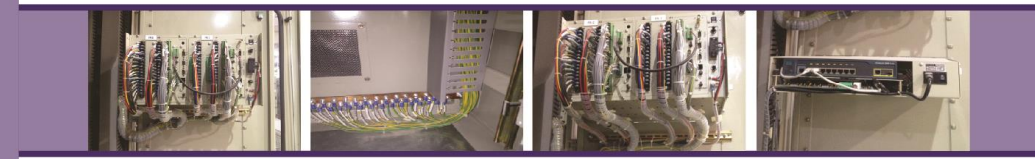
TRG-019-2015 Phase B

Photo (1): View of the subject

Conclusions

The tested Relay Panel does not in section 2 mean the criteria set in IEC-6029, 2015:01 for the leakage of pre-actor case IP-41.

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GERMAN CERT
ISO 9001:2008
KorQ-153697

Relay and Control Panel

ERFC protection and control panels comprise of panel structure and other discrete relays, meters devices. As such we do not have any direct statistical data to show product life data of protection and control panel assembly, however ERFC has supplied lots of relay and control panels through contractors like Electrical Relays Center and Nibras Al-Sharq for Hail, Riyadh, Qassim and other projects and ERFC has supplied some control and relay panels to PAUWELS for Hail transformer projects. The relays, meters and etc. are also from SEC/NG-SA approve list like ABB, SIEMENS, AREVA and REYROLLE. Therefore we confirm that our product life data meets & extends the minimum standard values.



ERFC Relay and Control Panel Unique Features

ERFC protection and control panels are designed and manufactured of high degree of protection and control to power system equipment i.e. transformer line, bus bars and breakers, etc. as per SEC/NG-SA requirements.

ERFC products have the following unique features:

- High quality panel structure (More Strong).
- High quality panel wiring.
- Microprocessor based/Numerical protective relays.
- High accuracy analog/digital meters.
- Custom design Mimic diagrams.
- Both freestanding and wall mounting type panel design available.
- Both fixed and swing type 19" rack construction available for relay/meters and pilot devices installation on floor mounting type panel.
- Glazed door for floor mounting type panel to view protection panel front mounted components.
- Dead front and rear access or front type control panels.
- Test switch facilities testing of relays and meters from the front of the panel.
- Panel protection NEMA type 1, IP 41 or more.
- Meet ANSI, NEMA and IEC standards.



ERFC a **SEC/NG-SA Prequalified Company** also manufacture an Auxiliary AC/DC Panels comprise of panel structure and other discrete Breakers, meters devices and Bus bar. As such we do not have any direct statistical data to show product life data of auxiliary AC/DC panel assembly, however ERFC has supplied lots of Auxiliary AC/DC Panels through contractors like Electrical Relays Center to SEC Riyadh, Al-Kharj, Hail and Al-Qaseem and other projects and ERFC has supplied some Auxiliary AC/DC Panels to other customers like Setraa Al-Amal Manufacturing Co. and ComAp Systems Company Ltd. for local projects. The Breakers, meters and etc. are also from SEC/NG-SA approve list like ABB, SIEMENS, HAGER and SCHNEIDER. Therefore we confirm that our product life data meets & extends the minimum standard values.



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