






		ELECTRICAL A. MODERN FACTORY COMPANY		
		ROUTINE VERIFICATION CERTIFICATE		Format No. FM 19-04 Rev.04
Date: 03/03/2021		Order No.: 10617	Tag No.: MCC-MORGUE	
Customer: MZQ CONTRACTING EST.		Drawing No.: DP-34354-20	Item No.: 08	
V	Power switchgear and controlgear assembly (PSC)		Un: 400VAC	
	Distribution boards intended to be operated by ordinary persons (DBO)		InA: 100A	
IEC 61439 Section	Test Description	YES	NO	N/A
11.2 Degree of protection of enclosures				
	• Degree of protection as specified (Visual test)	V		
	• All gaskets intact	V		
	• Door is aligned (no damages)	V		
11.3 Clearances and creepage distances				
	• Clearances and creepage distances as per standard	V		
11.4 Protection against electric shock and integrity of protective circuits				
	• All live terminals are covered to IP2X	V		
	• Doors are earthed	V		
	• Earth is connected to metal frame in all sections	V		
11.5 Incorporation of built-in components				
	• Busbar dimensions and supports are as specified	V		
	• Busbars identification are as specified	V		
	• Breakers ratings and settings are as specified	V		
11.6 Internal electrical circuits & connections				
	• Loose-free connection at joints	V		
	• Pressure washers on sides of connection	V		
	• Torque checked of all connections/joints	V		
11.7 Terminals for external conductors				
	• Terminals sizes and numbers are sufficient	V		
	• Terminals identification are as specified	V		
	• Sufficient space for incoming/outgoing cables	V		
11.8 Mechanical operation				
	• All mechanical interlocks are working	V		
	• All manually operated components are working	V		
	• Doors (including locks) are easily open and close	V		
11.9 Dielectric properties				
	• The Test voltage for power switchgear and control gear assemblies with a rated insulation voltage between 300-690V AC is 2,670 V d.c. for 1 second.	Phase/Phase	≥1000	MΩ
		Phase/Neutral	≥1000	MΩ
		Phase/Earth	≥1000	MΩ
		Neutral/Earth	≥1000	MΩ
	• For assemblies with incoming protection rated up to 250 A, the verification of insulation resistance may be by measurement at a voltage of 500 V d.c. Test is satisfactory if the insulation resistance between circuits and exposed conductive parts is at least 1000 Ω/V	Insulation Resistance:		≥1000 Ω/V
11.10 Wiring, operational performance & function				
	• Busbar and power continuity test point to point	V		
	• Earth continuity test	V		
	• Overload and tripping functions	V		
      				
Date	QA/QC	Elect. Engineer		
03/03/2021	