

## MATERIAL OF COSTRUCTION OF "ELMECH" BRAND ELECTRIC MOTOR.

### TEFC SQUIREAL CAGE INDUCTION MOTOR

Sr.No.	Material	Specification	Make	Refrence
1	C.I.	FG 200		As per IS 210
2	WINDING :			
	a) Copper wire	Enamelled wire Grade: F	Shramik or Shreyans	As per IS 13730 (Part:34) 1993
	b) Conn. Wire	Fiber Glass lead wire		
	c) Insulation Paper	"F" class		
	d) Varnish	Insulated Varnish	Dr. Back	
3	a) Stamping	C.R.N.O (Silicon Stamping) Gr.: M-45		
	b) Rotor	Alluminium Pressure Die Cast		
4	Bearing	Ball Bearing	NBC/SKF/NACHI/ FAG	
5	Rotor Shaft	EN 8 (M.S)		
6	Terminal Box	C.I		
7	Terminal Plate	Bacalite with 3 or 6 Terminal		
8	Fan Cover	M.S. Fan Cover		
9	Fan	Plastic Fan		
10	Oil Seal		SCOMI Seals	

### TESTING OF TEFC MOTORS

All motors are tested in accordance with IS : 325

#### ROUTINE TESTS:

The following are the routine test carried out on each and every motor.

- (A) Insulation resistance test.
- (B) Motor are tested at 1/3 times the rated voltage for checking the ability of the motor to run up to full speed, When switched on either direction.
- (C) No load test: This test is carried out at a rated voltage and the reading for current and power input are noted.
- (D) Locked rotoe test: This test is carried out at a reduced voltage, approx.1/3rd of the rated voltage and the readings for current and power input are noted.
- (E) High Voltage test.

## **TYPE TEST :**

The following test are carried out on one motors in a batch production, or on motors specifically required to be type tested as per customer requirement.

- (A) Measurement of stator resistance
- (B) Locked rotor test at rated volt. and measurement of current,power and values of torque of motor.
- (C) Full load reading of voltage, current, power input and slip
- (D) Temperature rise test
- (E) Momentary overload test.
- (F) Insulation resistance test (Both before and after high voltage test)
- (G) High voltage Test

**NOTE :** The meters used for noting the above reading have class 0.5 accuracy.

## **INSTRUMENTATION FOR TESTING**

Accuracy of instruments:

- a) The accuracy for Wattmeters is +/- 0.5 %
- b) The accuracy for Voltmeters and Ammeters is +/- 0.5 %
- c) The accuracy for Frequency meter is +/- 0.5 %
- d) The accuracy for CT and PT is +/- 0.5 %
- e) The accuracy for speed measurement is +/- 1.0 %
- f) Dyanamo Meter 3.0 KVA for Type test up to 2.2 KW Motor
- g) Dynamo Meter 11.0 KVA for Type test up to 7.5 KW Motor