FRANKLIN AID

Franklin Electric

Franklin Application/Installation Data *Europe* No. 01/2018

THE IMPORTANCE OF GOOD DATA

When you purchase a product, you expect it to work - that's what you purchased it for.

In real life, products sometimes fail to perform as expected, and this is when things become interesting. Manufacturers, dealers, installers, customers – they are all part of the communication chain when a product fails to perform.

The number one priority for the user is restoring the functionality of the broken product. The faster and easier this process works, the more likely it is the customer will be satisfied with the performance of his supply chain.

Franklin Electric has long been known for being exactly this: a company you can trust - before AND after the sale. This AID bulletin is a plead for our cause – the cause of providing good service.

Product Failure Tracing

Aside from merely determining whether a claim for free product replacement (usually called "warranty replacement") is founded, the more important task is often to understand the reasons the product failed.

Why? Because today, most quality manufacturers have sourcing and manufacturing processes in place that guarantee a flawless and constant quality of their product.

Consequently, experience accumulated in our service department shows that in most cases, the root cause of failure lies in the application itself.

> ***Not chasing down and eliminating this cause will lead to premature failure of the replacement product, leaving behind an even more unsatisfied customer.***

franklinwater.eu

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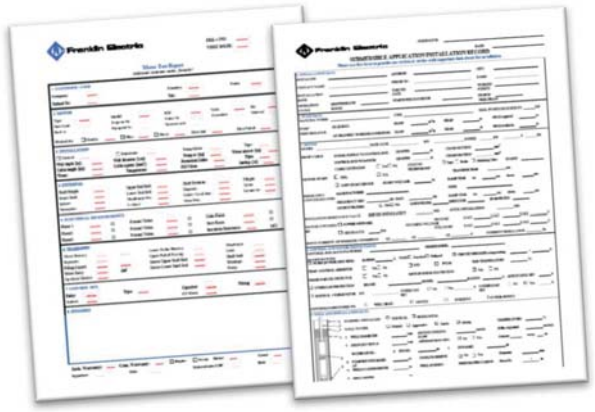
Franklin Electric

Help Franklin Electric Field Service to help you!

To make this work, Franklin Electric maintains a network of Field Service Engineers and Franklin Electric Service Partners that are there in case of trouble. Lines are open on "all channels" – including e-mail, telephone, world wide web to name the most common. After the first contact is made, it is important we are provided with data on:

- Product identification and motor details (date code, sequence no., etc.) and year of purchase
- Installation details and failure mode

Because the questions are always the same, we have designed standard forms for your convenience. These shall be primarily used to convey all needed information:



(Please see documents enclosed in this AID)

Sometimes, this data contained in these forms will already allow us to determine what went wrong and how it can be corrected. Our specialists will get back to the business partner with a failure report containing the probable root cause of failure, the commercial decision on product replacement and our recommendations for system improvement.

In other cases, we will have to get the product back for a deeper inspection or even have a Field Service Engineer visit the application site.

Be sure to observe your next training opportunities:

However, one thing to remember is:

> ***The better the input data, the faster and more accurate the response.***

From experience, information received upfront is often incomplete, misleading or incorrect. This leads to callbacks, additional workload and unnecessary delays in resolving a claim.

Not surprisingly, the same applies to pre-sales service. When quoting equipment for an installation, the engineer must be provided with sufficient system details to properly fulfil his job. A lot of expensive commissioning and – afterwards – service calls can be avoided if the equipment ties in well and interfaces work.

Thank you for your business and we are looking forward to assisting you with whatever issues you may encounter using Franklin Electric products!

TRAINING SCHEDULE

Submersible Motor Workshop
English: 13 – 14 Nov. 2018
German: 20 – 21 Nov. 2018

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ORIGINATOR _____

DATE _____

SUBMERSIBLE APPLICATION INSTALLATION RECORD

Please use this form to provide our technical service with important data about the installation.

1. INSTALLATION DATA

INSTALLER _____ ADDRESS _____ CITY _____

CONTACT NAME _____ PHONE NO. _____ E-Mail _____

INSTALLATION DATE _____ FAILURE DATE _____ WORKED PERIOD _____

OPERATION CYCLE MONTHS/DAYS/HOURS _____ STARTS PER DAY/HOUR _____ STARTS TIME DELAY _____

2. PUMP DATA

MANUFACTURER _____ TYPE _____ MAX. POWER REQUIRED P2 _____ kW

PUMP PERFORMANCE

REQUIRED FLOW _____ m^3/h HEAD _____ m NPSH required _____ m

AT DELIVERY WORKING CONDITION FLOW _____ m^3/h HEAD _____ m NPSH available _____ m

3. MOTOR

MODEL _____ DATE CODE _____ S/N _____ POWER _____ kW _____ V _____ Hz

DROP CABLE

POWER SUPPLY TO CONTROL BOX LENGTH _____ m CROSS SECTION _____ mm^2

CONTROL BOX TO MOTOR LENGTH _____ m CROSS SECTION _____ mm^2

CABLE EXTENSION ☐ Yes ☐ No SPLICING TECHNOLOGY ☐ Tape ☐ Resin ☐ Shrinking Tube BRAND _____

MOTOR START ☐ DOL ☐ Y/Δ TRANSFER TIME _____ sec

☐ SOFT START DEVICE START VOLTAGE _____ % RAMP TIME up _____ sec down _____ sec

FREQUENCY CONVERTER (VFD) MANUFACTURER _____ TYPE _____

FREQUENCY MIN _____ Hz /MAX _____ Hz RAMP TIME up _____ sec down _____ sec

OUTPUT FILTERS ☐ Yes ☐ No SINUS FILTER _____ INDUCTOR _____ dV/dt-FILTER _____

INSULATION RESISTANCE VALUE BEFORE INSTALLATION _____ MΩ AFTER INSTALLATION _____ MΩ

MOTOR POWERED BY ☐ POWER NETWORK INCOMING VOLTAGE NO LOAD L1-L2 _____ L2-L3 _____ L3-L1 _____ V

☐ GENERATOR _____ Kva FULL LOAD L1-L2 _____ L2-L3 _____ L3-L1 _____ V

INPUT CURRENT AT WORKING CONDITION L1 _____ L2 _____ L3 _____ A **CURRENT IMBALANCE** _____ %

4. CONTROL AND MOTOR PROTECTION(S)

CONTROL BOX MANUFACTURER _____ SERIES/MODEL _____

EQUIPPED WITH

☐ FUSES (POWER LINE SIDE) RATING _____ A TYPE ☐ Standard ☐ Delayed ☐ CIRCUIT BREAKER rating/setting _____ / _____ A

TEMP. CONTROL ARRESTOR ☐ Yes ☐ No ☐ PTC ☐ PT100 TRIP TEMPERATURE _____ °C

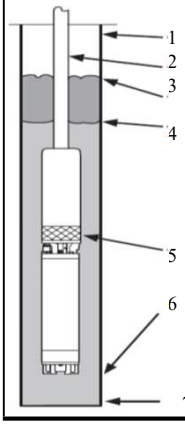
PHASE FAILURE DETECTOR ☐ Yes ☐ No MOTOR SURGE PROTECTION ☐ Yes ☐ No

☐ OVERLOAD PROTECTION BRAND _____ MODEL _____ RATING _____ A ADJUSTABLE SET _____ A

☐ SUBTROL +/SUBMONITOR S/N _____ OVERLOAD SET ☐ No ☐ Yes _____ A UNDERLOAD SET ☐ No ☐ Yes _____ A

CONTROLS GROUNDED TO ☐ WELL HEAD ☐ MOTOR ☐ BUILDING ☐ POWER SUPPLY

5. WELL AND INSTALLATION DATA



PUMPSET INSTALLED ☐ VERTICAL ☐ HORIZONTAL

WELL WATER ☐ Normal ☐ Aggressive ☐ Sandy ☐ Muddy TEMPERATURE _____ °C

1 WELL DIAMETER _____ mm MOTOR COOLING FLOW _____ cm/sec (Min. requested _____ cm/sec)

2 DELIVERY PIPE Ø _____ mm Additional check valve ☐ No ☐ Yes Amount _____ every _____ m

WATER LEVEL: **3** STATIC _____ m **4** DYNAMIC _____ m

5 PUMPSET INSTALLED AT _____ m COOLING SLEEVE ☐ No ☐ Yes Diameter _____ mm

6 WELLS CASING DEPTH _____ m WELL SCREEN - PERFORATED CASING From/To _____ / _____ m

7 WELL DEPTH _____ m

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FEE – NO: _____

VISIT DATE: _____

Motor Test Report

Additional comments under „Remarks“

1. CUSTOMER / USER

Company: _____ **Country:** _____ **Town:** _____

Talked To: _____ **Tel.:** _____

2. MOTOR

Type: ..... Modell: _____ KW: _____ Volts: ..... Hz: .....

Date Code: _____ Sequenz-Nr: _____ Stator Nr: _____ Assembler: _____ Material .....

Built in: ..... Equipped for: ..... Worked with .....

Worked for: ☐ Months _____ ☐ Days _____ ☐ Hours _____ Date Inst.: _____ Date Failed: _____

3. INSTALLATION

☐ Vertical _____ ☐ Horizontal _____ Pump Make: _____ Type: _____

Well depth /[m]: _____ Well diameter /[cm]: _____ Pump at /[m]: _____ Water inlet at /[m]: _____

Cable length /[m]: _____ Cable square /[mm²]: _____ Protection Make: _____ Type: _____

Water: _____ Temperature: _____ PH-Value: _____ Setting /[A]: _____

4. EXTERNAL

Shaft Height: ..... Upper End Bell: ..... Shaft Rotation: ..... Slinger: .....

Stator Shell: ..... Lower End Bell: ..... Deposits: ..... Valve: .....

Splines: ..... Diaphragm Pos.: ..... Cable / Lead Insu.: ..... Connector .....

Nameplate: ..... Leakage: ..... Snap Ring: .....

5. ELECTRICAL MEASUREMENTS

Phase 1: _____ Ω Normal Value: _____ Ω Main Phase: _____ Ω

Phase2: _____ Ω Normal Value: _____ Ω Start Phase: _____ Ω

Phase3: _____ Ω Normal Value: _____ Ω Insulation Resistance: _____ MΩ

6. TEARDOWN

Thrust Bearing: .... Lower Radial Bearing: ..... Diaphragm: .....

Segments: ..... Upper Radial Bearing: ..... Liner: .....

Filling Liquid: .... Sleeve Upper Shaft End ..... Shaft Seal: .....

Water Entry: _____ cm^3 Sleeve Lower Shaft End ..... Windings: .....

Up-thrust Washer ..... Prong: .....

7. CONTROL BOX

Relay: ..... Type: _____ Capacitor: ..... Wiring: .....

Subtrol: ..... CP-Water: .....

8. REMARKS

Tech. Warranty: ..... **Com. Warranty:** ..... ☐ **Repair** ☐ **Scrap** **Defect:** ..... **Cause:** .....

Signature: _____ **Date:** _____ **Entered into EDP:** _____ **Date:** _____