

## Life Extension for Synchronous Motor Controls

A synchronous motor and its control system are a significant capital investment. Quad Plus' Power Systems Division assists customers in extending the life of this investment through a cost-effective retrofit. By updating the field control circuits, the useable life is significantly increased.

## **Upgrade your Legacy Systems**

Many applications still utilize synchronous motors that were installed anywhere from 30 and 70 years ago. Usually, these motors have been maintained and upgraded so the motors are in good working condition. However, most of the controls (relays and DC contractors) are still the original with little or no maintenance or upgrades. Support for these components is insufficient:

- Controls installed decades ago are not totally supported by the Original Equipment Manufacturer (OEM)
- The OEM may no longer be in business.
- OEMs have made the control systems obsolete and replaced them with newer technologies.
- The field application relay, the most common point of failure, is no longer available from the OEM or other manufacturers.

### **Lower Cost**

Quad Plus' Synchronous Field Retrofit solution is a fraction of the price of a new induction motor and VFD control system. Our solution typically runs 100K or less, compared to 500K up to several million. We have applied this solution on motors from 250hp to 20,000hp.

## **Less Space**

Quad Plus' Synchronous Field Retrofit solution requires no additional space. Our retrofit controls fit in the exact same space you have today. Whereas a new system needs up to four times the space just for the upgraded controls. Save space with Quad Plus.

## Why Quad Plus?

- Quad Plus engineers have over 20 years' experience retrofitting field controls for synchronous motors.
- Quad Plus is one of the few retrofit engineering companies for synchronous motor controls certified by Kinetics.
- Quad Plus offers retrofit solutions for both brush and brushless systems.
- Quad Plus offers a customized solution that will keep your system running.
- Quad Plus offers AC motor protection relays for the stator.

# Synchronous Upgrade Applications

- ✓ Pumps
- ✓ Compressors
- ✓ Motor Generator Sets
- √ Banbury Mixers

#### **Client List**

- ✓ Chicago Dept. of Water
- Metropolitan Water Reclamation –
   District of Greater Chicago
- ✓ Cleveland Cliffs
- ✓ Northwest Indiana Water
- ✓ US Steel—Midwest Plant
- Miller Brewing
- ✓ US Steel Canada
- ✓ Spring Lake Drainage District

#### **Industries Served**

- ✓ Water & Wastewater Plants
- ✓ Steel Mills
- ✓ Power Generation Facilities
- ✓ Tire Manufacturing
- ✓ Industrial Plants



## **About Quad Plus**

Quad Plus has been providing industrial control systems, solutions and services for over 30 years. We offer an uncompromising level of service and expertise to maintain our customers' productivity. From an Electrical Install to complete Turnkey System Integration, our extensive process knowledge is supported by sound design capabilities from our 55 engineers, with a dedication to follow-up service, parts and repair. We are recognized in the field as a leader in AC & DC control systems by being an authorized service center for major manufacturers locally, nationally and internationally. Please feel free to contact us at: (219) 844-9214.

### **Other Power Services**

- Air & Vacuum Circuit
   Breaker Repair, Retrofit
   and Refurbishment
- Automatic Transfer Controls
- Motor RTD Monitoring Packages
- Medium Voltage Motor Starter/Contactor Upgrades
- ✓ Transformer Testing
- ✓ Circuit Breaker Testing
- ✓ Cable Testing

- ✓ Switchgear Testing
- ✓ Protective Relay Testing
- Battery Testing
- ✓ Generator/Motor Testing
- Meter Testing
- ✓ Infrared Scans/Surveys
- Utility Phasing
- Coordination Study Verification
- ✓ Power Quality Analysis
- ✓ Startup Support

### **Greater Chicago Area**

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## **Quad Plus Offices**

#### **Domestic Offices**

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