

Condition Monitoring of Compressors for Refrigeration

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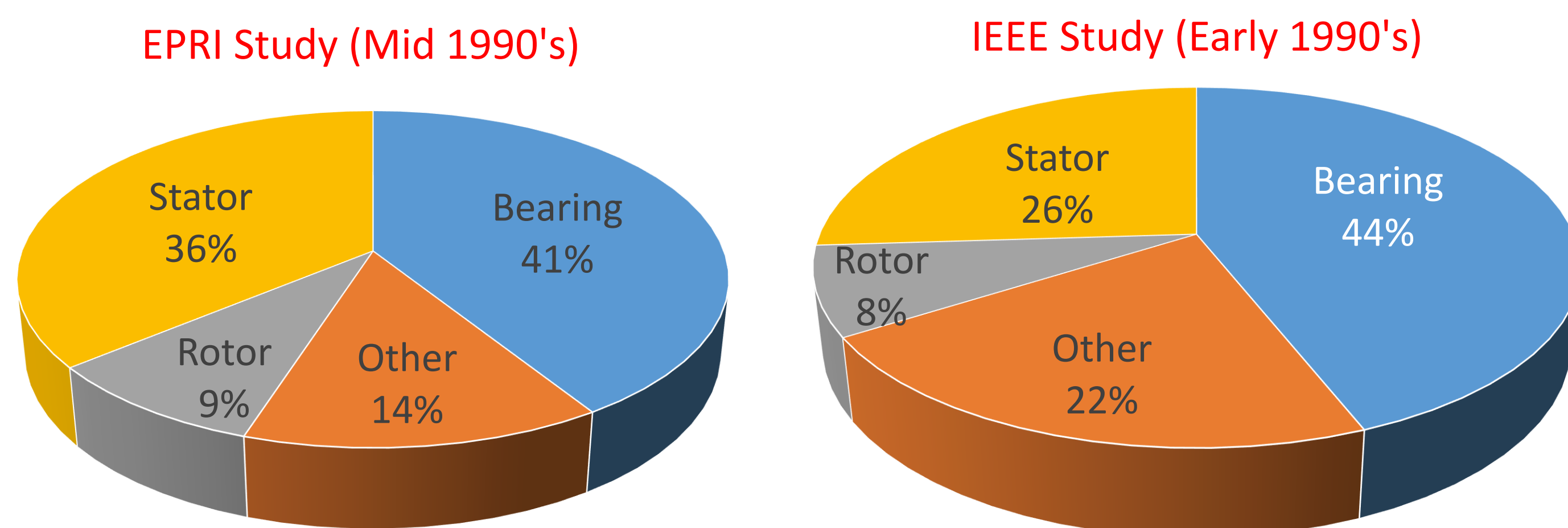


Abstract

This poster deals with stator, bearing, and rotor fault detection of compressors for refrigeration. Mathematical modeling of compressors for refrigeration for healthy and stator, bearing, and rotor fault condition are explained.

Introduction

Motor Failure Modes – Why Test Electrically?

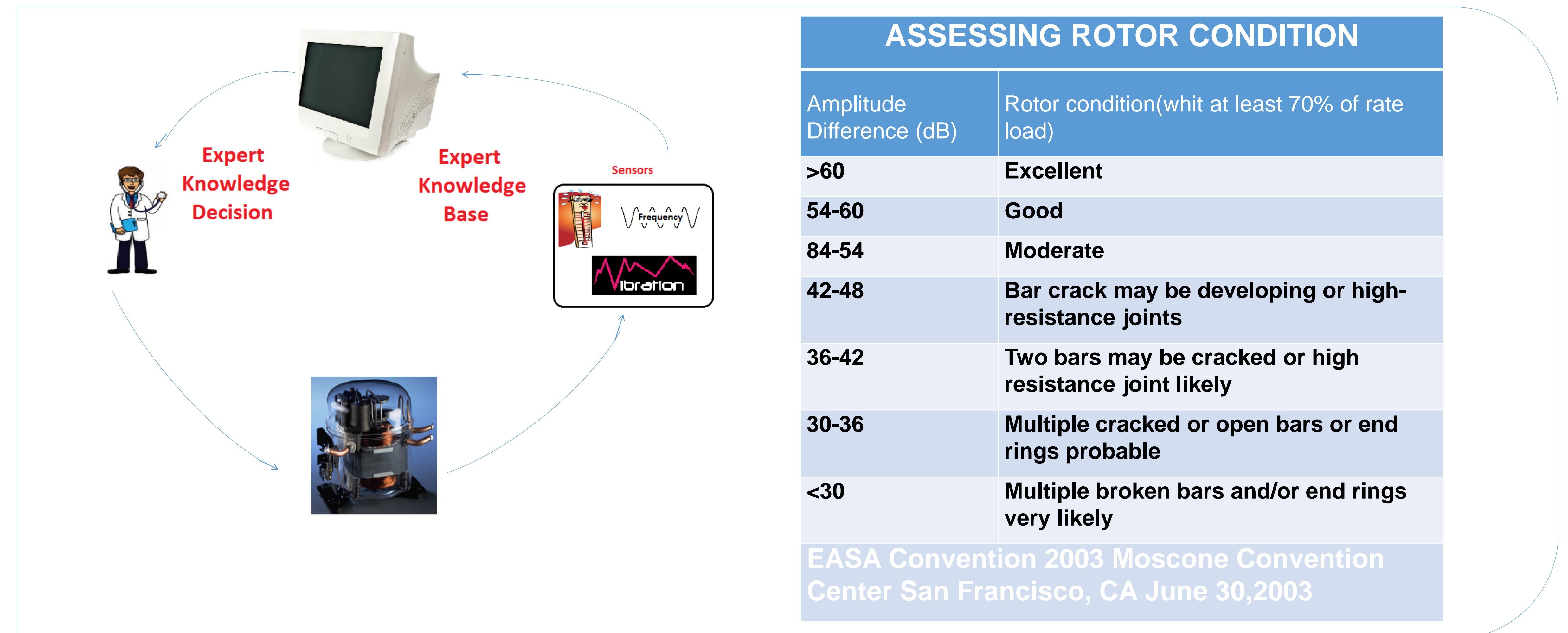


- **Condition monitoring** plays a vital role for fault detection in compressors for refrigeration.
- **it is highly preferable** to avoid any kind of fault occurring in the compressors for refrigeration.
- **Condition monitoring** is a technique to **predict** the need for maintenance before any serious deterioration occurs.

Requirements

- **Frequency:** The compressor is simulated for healthy condition at 0% load (no load), 20% load, 40% load, 80% load and at 100% load (full load).
- **Temperature:** Also, the compressor is simulated for temperature condition at 80 F, 120 F, 160 F, 200 F, and 240 F.
- **Vibration:** The compressor to be tested should be mounted on a vibration at least four different times.

Design



Conclusion

- Condition monitoring has become a very important technology in the field of electrical equipment maintenance, and has attracted more and more attention worldwide. The potential functions of failure prediction, deflection identification, and life estimation bring a series of advantage for utility companies.

References

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