# Workshop Agenda





### Magnetic Sensors

#### **CONTACTLESS TECHNOLOGY**

- ROTARY AND LINEAR MOTION DETECTION CIRCUITS
- ON-AXIS AND OFF-AXIS ROTATION ANGLE MEASUREMENT
- LINEAR POSITION MEASUREMENTS
- RELIABILITY AND ACCURACY

#### CHOOSING THE CORRECT SENSOR

- INTEGRATED HALL EFFECT IC
- ANGLE AND POSITION SENSORS

#### SPECIALIZED DESIGN TECHNIQUES

- EXTENDING VERTICAL RANGE
- ANGLE ERRORS AND MISALIGNMENT
- FIFLD NON-LINEARITY AND MAGNETIC OFFSET



### Schedule:

## Magnetic Materials

#### PROPERTIES AND TERMINOLOGY

- HYSTERESIS LOOP
- REMANENCE, COERCIVITY & ENERGY PRODUCT
- TEMPERATURE CHARACTERISITCS
- CHEMICAL AND PHYSICAL PROPERTIES

#### **SELECTION CRITERIA**

- INDIVIDUAL MAGNET CHARACTERISTICS
- AVAILABILITY AND PRICING ISSUES
- GLOBAL TRENDS AND SUPPLIER ISSUES

#### **DESIGN CONSIDERATIONS**

- APPLICATION AND ENVIRONMENTAL LIMITS
- REQUIRED SPECIFICATIONS ON DRAWINGS
- INFLUENCE OF FURTHER PROCESSING

#### **MODELING SOFTWARE & METHODS**

- BASICS FOR SETTING UP AND LIMITATIONS
- EXAMPLE OF A MAGNETIC CIRCUIT USING FEM
- IN HOUSE SOFTWARE VS. TURN KEY SOLUTIONS
- PROS AND CONS OF AVAILABLE SOFTWARE





# Magnetizing & Testing

#### **MAGNETIZING EQUIPMENT**

- MAGNETIZING CONFIGURATIONS
- TYPES OF MAGNETIZERS AND SUITABILITY
- DEMAGNETIZING AND CYCLING
- ELECTRONICS AND PROCESSING

#### **MAGNETIZING FIXTURES**

- TYPES AND PROCESSING REQUIREMENTS
- COOLING AND LIFE EXPECTANCY

#### **TESTING EQUIPMENT**

- REQUIREMENTS FOR MAGNET PROPERTIES
- TYPES OF INSTRUMENTS
- 9:00 AM START OF WORKSHOP WITH BRIEF INTRODUCTION TO PARTICIPANTS, SNACKS AND BEVERAGES SERVED
- 9:15 AM 90 MINUTE PRESENTATION ON MAGNETIC MATERIALS, 15 MINUTE Q&A SESSION
- 11:00 AM 60 MINUTE PRESENTATION ON TYPES AND USAGE OF MAGNETIC MODELING SOFTWARE
- 12:00 PM BREAK FOR BUFFET LUNCH IN DINING ROOM
- 1:00 PM 90 MINUTE PRESENTATION ON MAGNETIZING &TESTING EQUIPMENT, 15 MINUTE Q&A SESSION AND BREAK
- 2:45 PM 90 MINUTE PRESENTATION ON MAGNETIC SENSORS, 15 MINUTE Q&A SESSION. CONFERENCE ENDS BY 5 PM