



**EXPERIENCE.  
KNOWLEDGE.  
INSIGHT.**

SOLUTIONS BUILT ON A CENTURY  
OF INNOVATION AND EXPERTISE.

DOBLE ENGINEERING COMPANY



AT ANY GIVEN TIME, YOU NEED TO KNOW THE STATUS OF YOUR FLEET AND THE CONDITION OF ALL YOUR ASSETS.

YOU NEED A PARTNER WHO CAN BRING CLARITY TO THE COMPLEXITY.

DOBLE IS THAT PARTNER.

At the core of everything we do, the Doble Knowledgebase is an unmatched resource. Continually growing with over 44 million data points sourced from electrical apparatus testing, it contains over 70 years of historical and comparative data that powers the solutions and services we supply to the industry.

Doble provides you with predictive value to evaluate whether your assets are performing as per your design and intention. Our tools, technology, and services uncover indicators of developing faults, and provide actionable intelligence to help ensure your assets' reliability. Whether you are in the field or the office, you'll have the information you need, when you need it.

MAINTAINING POWER IS A DYNAMIC PROCESS INVOLVING MANY MOVING PARTS AND DEPARTMENTS, FROM ASSETS THROUGH FIELD CREWS.

IT'S OUR JOB TO MAKE SURE YOU CAN DO YOURS. DOBLE IS WITH YOU EVERY DAY, EVERY STEP OF THE WAY.

## THE ASSET OWNERSHIP CYCLE

### ○ PLAN

Improve your planning process with services such as procurement consulting, commissioning design, and test planning, which take into account your maintenance, replacement, and repair strategies for a more reliable system.

### DIAGNOSE ○

Understand the condition of your system using in-service & off-line testing tools, on-line monitoring, protection testing, enterprise asset management systems, and consulting & testing services.

### ○ MANAGE

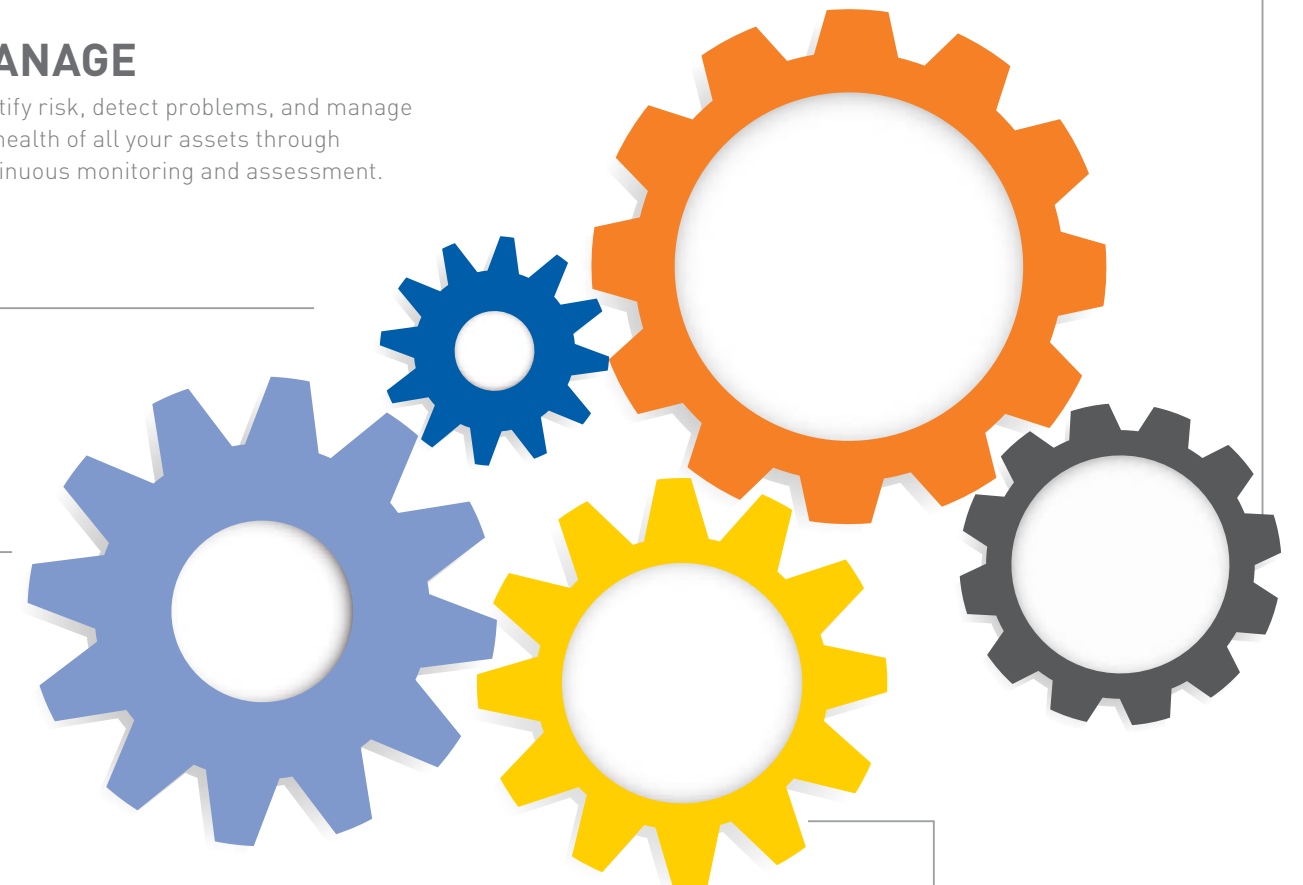
Identify risk, detect problems, and manage the health of all your assets through continuous monitoring and assessment.

### ○ PREVENT

Prevent costly unplanned outages by identifying and detecting early indicators of damage, wear, and malfunction.

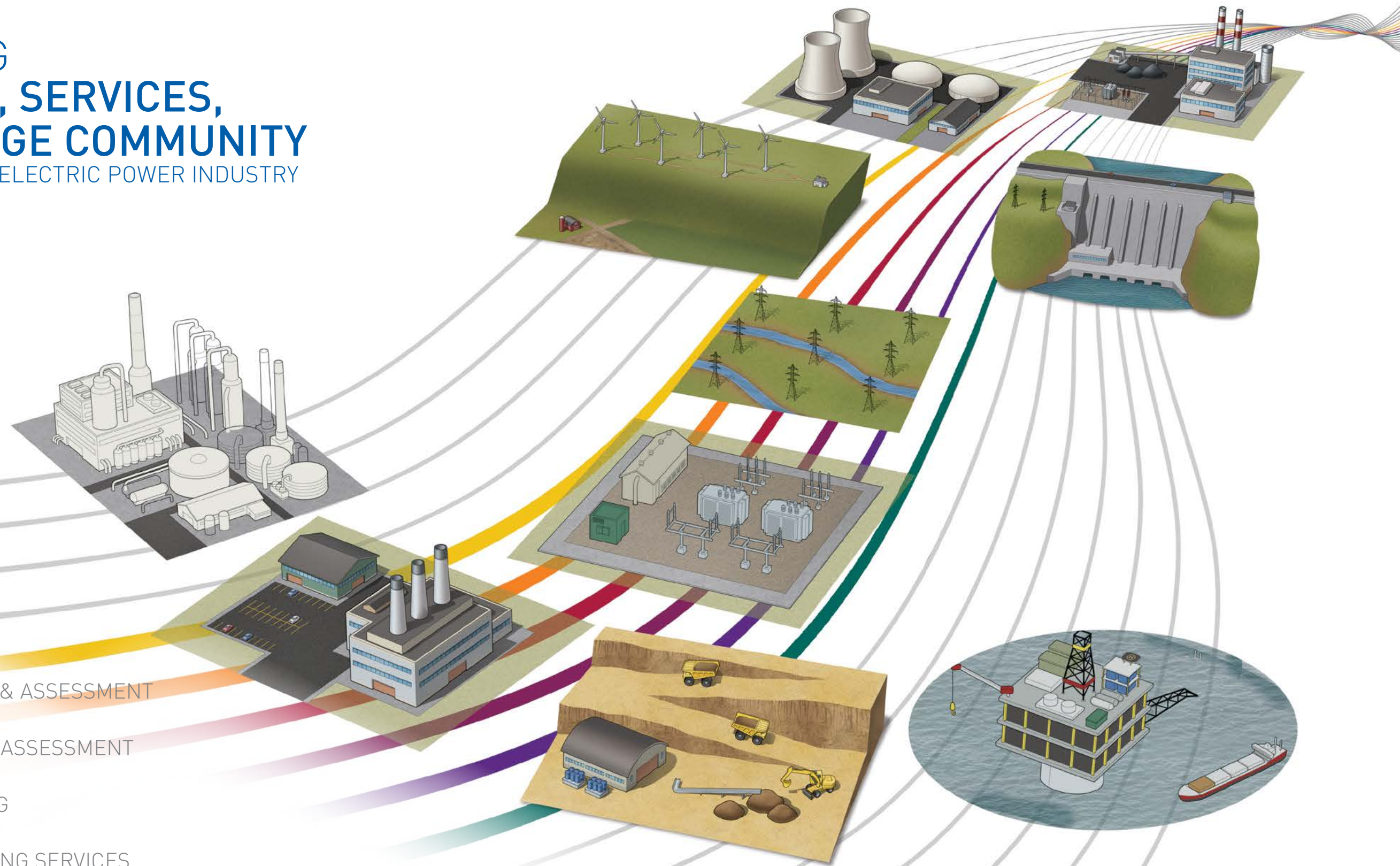
### EDUCATE ○

Share and learn with your industry peers through our Knowledge Community, training, and educational events.



# DELIVERING & SOLUTIONS, SERVICES, & KNOWLEDGE COMMUNITY THROUGHOUT THE ELECTRIC POWER INDUSTRY

- IN-SERVICE TESTING & ASSESSMENT
- OFF-LINE TESTING & ASSESSMENT
- ON-LINE MONITORING
- CONSULTING & TESTING SERVICES
- PROTECTION
- ENTERPRISE ASSET MANAGEMENT





# SOLUTIONS

## OPTIMIZE OPERATIONS WITH DOBLE SOLUTIONS

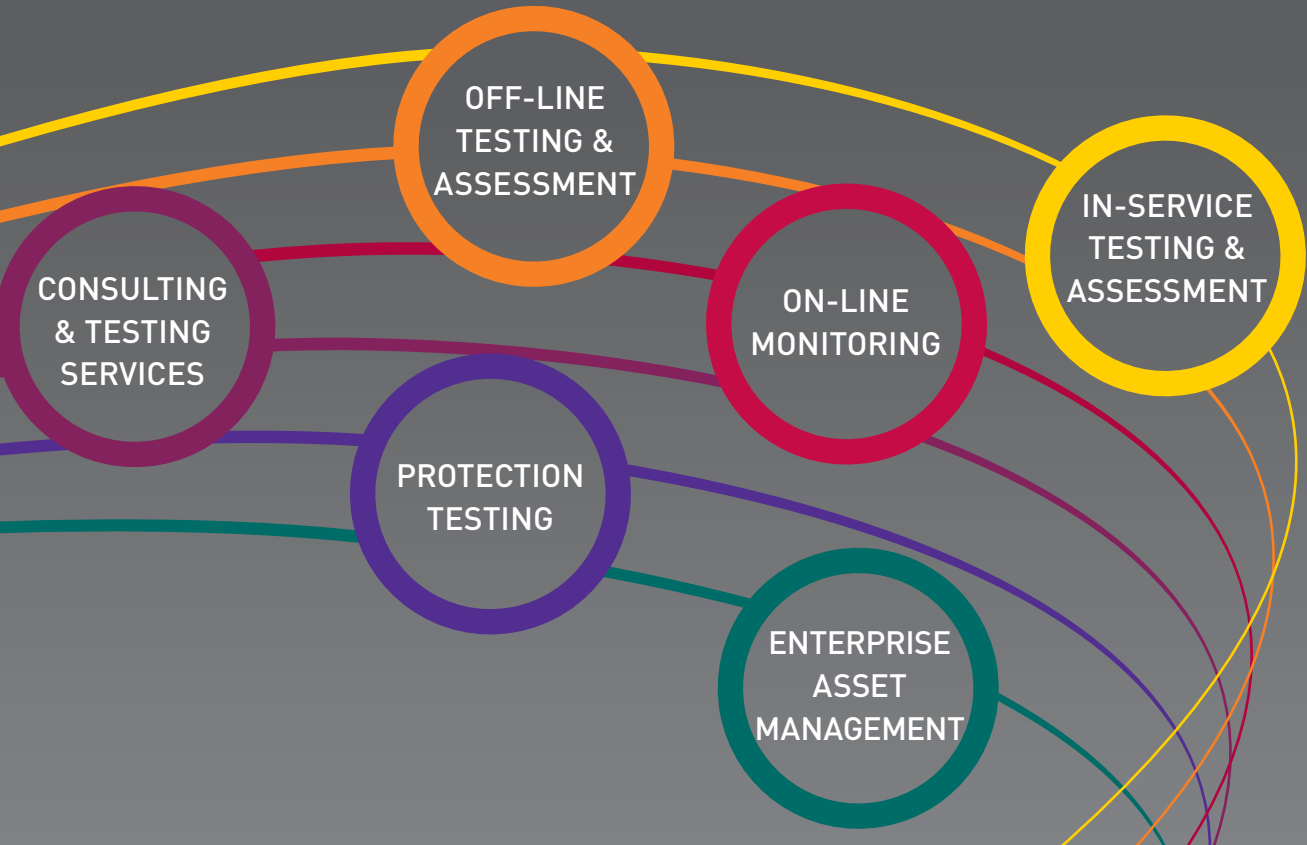
You need to understand the condition of your assets. Doble understands the way you work, and we build our diagnostic test equipment and software solutions to suit your operations and testing practices. Our role is to simplify the complexity you face and we do that by offering testing solutions for critical assets and scaling up through enterprise level solutions. Whether you need one testing device, several substation monitoring platforms, or a comprehensive risk management system, Doble has the answer.

## PROVIDING FLEXIBILITY FOR YOUR OPERATIONS

Doble provides flexibility for your business, with solutions and service levels that fit your procurement models. So now you can invest capital resources wisely across the asset ownership cycle.



## DOBLE'S RANGE OF SOLUTIONS FOR ALL YOUR ASSETS



- TRANSFORMERS
- BUSHINGS
- CIRCUIT BREAKERS
- ROTATING MACHINES
- PROTECTIVE RELAYS
- CABLES



# SERVICES

## DYNAMIC SUPPORT WITH DOBLE SERVICES

Our depth of experience allows us to provide you with an array of services that goes beyond tools and technology. Our global, multidisciplinary team of chemists and engineers works as an extension of your organization, providing comprehensive, unbiased expert advice and support. We provide neutral and independent insight into the problems you face.

### DOBLE CLIENT SERVICES GROUP THE FULL DOBLE COMMUNITY ENGAGEMENT

For even the most experienced technician, situations in the field are rarely black and white. Membership in the Doble Client Services Group gives you certainty and reliability. Make the right interpretation and the right decision – the first time and every time. Trust that your testing and diagnostic instrumentation is state-of-the-art and works on demand, or will be replaced within 24 hours. Train your test technicians and power engineers on the most current test practices and procedures.

As part of the Doble Client Services Group, you gain the full Doble experience. You join a vast community of experts. You gain access to the industry's most comprehensive resource libraries on the power grid. You also learn what your peers are doing, and what apparatus troubles and failures they are experiencing.

Today, more than ever, you need to invest your workforce and capital resources wisely across the ownership cycle of every asset. Take advantage of the full Doble community promise.

### DOBLE CONSULTING & TESTING SERVICES

#### INDUSTRY EXPERTS AT YOUR SERVICE

Today many companies are increasingly looking to outsource for answers to their toughest testing and diagnostic challenges. You need a partner with broad expertise in chemistry, on-line and off-line electrical testing, and transformer design and manufacturing experience. Our wide variety of skills fits together with yours, collaborating with your in-house experts, and giving you a complete picture of your situation, so you can focus your resources where they are really needed. Services include:

- Specification writing & review
- Design reviews
- Manufacturing plant inspections
- Factory witness testing
- Test data review
- Root cause analysis
- Condition assessment
- Fleet asset health review
- Forensic analysis
- Partial discharge testing
- EMI diagnostics survey
- In-service substation surveys
- Off-line electrical testing
- High-voltage laboratory services

### DOBLE INSULATING MATERIALS LABORATORY SERVICES

#### TRULY ONE OF A KIND

The industry has come to rely on Doble's expert laboratory services, which were established in 1933. Today, Doble possesses the widest scope of insulating material testing capabilities in asset diagnostics. We offer over 200 different tests on liquid and solid insulating materials.

Our chemists and engineers will help you identify the cause of apparatus problems and provide detailed test reports with data analysis and recommendations for next steps. Testing categories include:

- Transformer oil purchase specification testing
- Corrosive sulfur & passivators
- Dissolved gas analysis
- Furanic compounds in oil
- Water-in-oil analysis
- Degree of polymerization
- Oil quality screens
- Metals-in-oil
- Polychlorinated biphenyls (PCBs)

DOBLE HAS HELPED MORE THAN 5500 CLIENTS IN 110 COUNTRIES IMPROVE OPERATIONS & OPTIMIZE SYSTEM PERFORMANCE.

**THAT'S EXPERIENCE  
YOU CAN COUNT ON.**





# KNOWLEDGE

## GET EMPOWERED WITH THE DOBLE KNOWLEDGE COMMUNITY

Doble community engagement is all-embracing. We're your professional development partner. Whether you're an experienced power professional, or just starting out, we're here to support you through our conferences, technical publications, and active role in industry research and standards. It's a role we've cherished since the days of our founder, Frank Doble. The Doble Knowledge Community is your community. And Doble is committed to the development of this community by listening to you, working with you, and growing with the needs of our changing industry.



### EDUCATION

Doble supports educational initiatives that train the current and future workforce and is committed to advancing the science used in electric power industry testing. Doble invests in scholarship programs, professional education courses accredited by IACET, and university grants for research and development at leading academic institutes, creating centers of technology excellence.



### KNOWLEDGE

Knowledge is part of Doble's DNA. Whether it is the knowledge of the Doble team, renowned experts in their field, or the actual data in our Knowledgebase, this knowledge fuels everything we do. With over 44 million data points sourced from electrical apparatus, the Doble Knowledgebase contains over 70 years of historical and comparative data. This unmatched resource, combined with the expertise of the Doble team, powers the solutions, services, and knowledge we provide you as members of the Doble community.



### EVENTS

Doble has been hosting acclaimed educational events for over eight decades. These industry-leading conferences, technical seminars, and user group meetings bring together expertise across the power industry. At client-only conferences as well as open training programs, you and your industry peers can exchange best practices, get hands-on experience, and benefit from the collective knowledge of this learning community.

Client conferences and field seminars take place regionally, across the globe, and culminate in the annual International Conference of Doble Clients where attendees help define the future of the power industry. Additional training events focus on specific assets or testing practices, including transformers, circuit breakers, rotating machinery, and laboratory diagnostics.

## THE DOBLE KNOWLEDGE COMMUNITY IS YOUR COMMUNITY



# & SOLUTIONS, SERVICES, KNOWLEDGE COMMUNITY

**SOLUTIONS AND SERVICES YOU NEED.  
AND A COMMUNITY THAT ENHANCES THEM.**

Wherever you are in the power industry, at any given place in your asset ownership cycle, through all your testing practices, Doble is with you, through solutions, services and our knowledge community.



[www.doble.com](http://www.doble.com)

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