# WELCOME TO NARIME









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#### **FOUNDATION**



- The National Research Institute of Mechanical Engineering (NARIME) is a state institution belonging to Ministry of Industry and Trade.
- Founded in 1962.

#### **MAIN ACTIVITIES**

- ✓ Researching and setting up National development strategies and technical standards for mechanical industry;
- ✓ Organizing and being Leader of local companies to implement localization programs;
- ✓ Consulting, designing, manufacturing, technology transferring, trading, commissioning and start-up for production lines;
- ✓ Developing science and technology research and doing post graduated training.

#### In the field of:

- Thermal power,
- Hydro power,
- Alumina,
- Others Industry.

#### **CERTIFICATES**

BÔ KHOA HỌC VÀ CÔNG NGHỆ

CHÚNG NHẬN

ĐĂNG KÝ HOẠT ĐÔNG KHOA HỌC VÀ CÔNG NGHỆ

Đảng kỳ lần dầu, ngày 14/5/2003 (số đẳng kỳ:A- 079)

Tên tổ chức khoa học và công nghệ:

Viện nghiên cứu cơ khí

Tên viết bằng tiếng nước ngoài: National Research Institute for Mechanical Engineering

(NARIME) Tru sở chính:

Đường Phạm Văn Đồng, Q. Cấu Giấy, Tp. Hà Nội.

Tổng số vốn đặng ký

81.298,000,000 d 34.755.000.000 d Trong đó: Vốn cố định : Vốn lưu động: 46.543.000.000 d

Quyết định thành lập số: 782/QĐ - TTg ngày 24 tháng 10 năm 1996

> Hà nội, ngày 2 tháng 5 năm 2008 KT. BÔ TRƯỚNG

THE TRUCKG Le Đình Tiến

SOCIALIST REPUBLIC OF VIETNAM

CERTIFICATE OF BUSINESS AND TAX REGISTRATION SCIENCE AND TECHNOLOGY ORGANIZATION

Registered for the 1st time: 28 September 2010 Amending registered for the 3rd time: 09 April 2018

1. Name of the organization:

Name in Vietnamese language: VIÊN NGHIÊN CỐU CƠ KHÍ Name in foreign language: NATIONAL RESEARCH INSTITUTE OF MECHANICAL ENGINEERING

Abbreviated name: NARIME

2. The address of its headquarters: No.4 Pham Van Dong Street, Mai Dich Ward. Cau Giay District, Hanoi City, Vietnam Fax: 0.24.37649883

Tel: 024.37647350/37644442

Email: narime@narime.gov.vn Website: http://www.narime.gov.vn 3. Business scope:

Research and build strategies, policies, development plans, economic-technical rates, norms, standards in the field of mechanical engineering; Research and develop, apply and transfer mechanical engineering and

automatien technology;

Manufacture meishney, complete equipment of technology production line in industrial and economic fields in industrial and economic fields in industrial and economic fields.

In the complete of technology production line in industrial and economic fields;

Wholesale and retail machinery, complete equipment of technology production line in industrial and economic fields;

Tain to improve the level of management for manufacturing enterprises and beniences and the ability for eartific – ecohological staff of the institute and eartific – ecohological staff of the institute of the staff or exception of the staff or

businesses and the skills for scientific - technological staffs of the Institute (Only operate after the State auditory allows);

Graduate, postgraduate obsession and technical transitioning for professional control of the state of the sta

BAN DICH

Code of enterprise: 0100100110 CHÚNG CHỈ NĂNG LỰC HOẠT ĐỘNG XÂY DỰNG

> Số: BXD-00004639 (Ban hành kèm theo Quyết định gia hạn số: 43/QĐ-HĐXD-DN ngày 11/10/2022)

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM

Độc lập - Tự do - Hạnh phúc

Tên tổ chức: VIỆN NGHIỆN CƯỚI CƠ VHÍ Giấy chứng nhận đăng ký doanh nghiệp/ Quyết định thành lập số: 0100100110

Ngày cấp: 28/9/2010. Nơi cấp: Sở Kế hoạch và Đầu tư thành phố Hà Nội. Tên người đại diện theo pháp luật: Ông/Bà: Phan Đãng Phong Chức vụ: Viện trưởng Địa chi trụ sở chính: Số 4 đường Phạm Văn Đồng, phường Mai Dịch, quận Cầu Giấy,

thành phố Hà Nội. Số điện thoại: 024.3764,4442 Website: Phạm vi hoạt động xây dựng: 1. Thiết kế, thẩm tra thiết kế xây dựng công trình:

BỘ XÂY DỰNG

CỤC QUẨN LÝ

HOẠT ĐỘNG XÂY DỰNG

Thiết kể, thẩm tra thiết kể Cơ-Điện công trình Công nghiệp: Hạng I
 Tư vấn giám sát lấp đặt thiết bị Cơ-Điện công trình:
 Từ vấn giám sát lấp đặt thiết bị Cơ-Điện công trình: Hạng I

Chứng chi này có giá trị đến hết ngày: 11/10/2032.

Hà Nội, ngày 11 tháng 10 năm 2022

CHÚNG CHỈ CÔNG NHẬN Certificate of Accreditation

TRUNG TÂM KIỆM ĐỊNH VÀ KỸ THUẬT CÔNG NGHIỆP VIÊN NGHIÊN CÚU CƠ KHÍ

CENTER OF INSPECTION AND INDUSTRIAL ENGINEERING NATIONAL RESEARCH INSTITUTE OF MECHANICAL ENGINEERING

> Số 4 Phạm Văn Đồng, phường Mai Địch, quận Cấu Giấy, Hà Nội đã được đánh giá và phù hợp với các yếu cầu của tiêu chuẩn has been assessed and found to conform with the requirements of standard

> > ISO/IEC 17025:2017

Lĩnh vực công nhận Field of Accredita CO, HÓA, THỬ NGHIỆM KHÔNG PHÁ HỦY Mechanical, Chemical, NDT Māsá

> Accreditation No **VILAS 1031**

GIÁN ĐỐC VĂN PHÔNG CÔNG NHẬN CHẤT LƯỢNG (Director of Bureau of Accreditation)

BÒ CÔNG THƯƠNG CUC ĐIỀU TIẾT ĐIỆN LỰC



GIÁY PHÉP HOAT ĐỘNG ĐIỆN LỰC

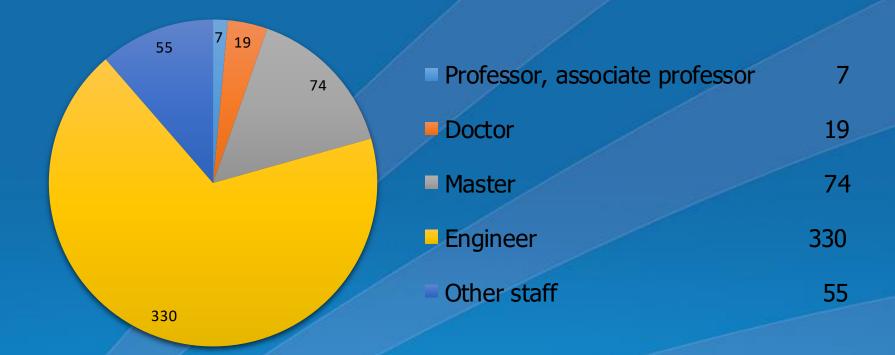
> SO - AS CR-DIDE



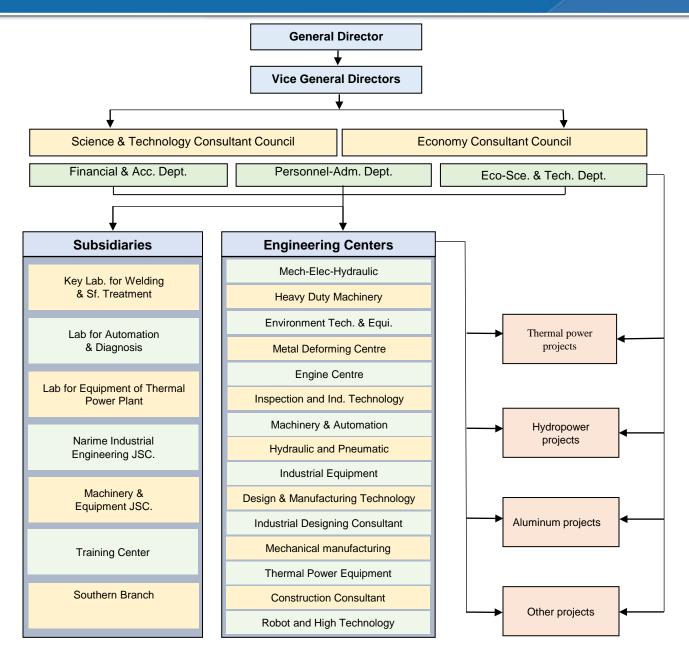




### Staff total: 485



### **Organization chart**



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### THERMAL POWER INDUSTRY

#### **THERMAL POWER PLANT**

- > Narime is assigned by the Gov. to be the leader of national localization program for coal fired power equipment:
  - + Propose development strategy
  - + Being the Leader of local companies for localization program of BOP equipment
  - + Cooperating with foreign companies to be the EPC contractor for TPP
  - + Acting as an engineering company to receive technologies and responsible for designing and consultant services
- ➤To be the EPC contractor of BOP systems in coal fired power plants
- ➤ Supplying overhaul and upgrading services for AHS, FGD, ESP, CHS, WWTP, automation control system... for local thermal power plants.

#### **THERMAL POWER PLANT**

- ➢ Being EPC contractor in supplying Electro Static Precipitator (ESP) system for 2x600 MW Vung Ang 1 coal fired power project.
- ➢ Being EPC contractor in supplying Electro Static Precipitator (ESP) system for 2x300 MW Thai Binh 1 coal fired power project.
- ➢ Being EPC contractor in supplying Electro Static Precipitator (ESP) system for 2x600 MW Nghi Sơn 2 coal fired power project.
- ➢ Being EPC contractor in supplying Ash Handling System (ASH) system for 2x300 MW Thai Binh 1 coal fired power project.
- ➢ Being EPC contractor in supplying Ash Handling System (ASH) system for 2x600 MW Nghi Sơn 2 coal fired power project.
- ➢ Being EPC contractor in supplying coal handling system (CHS) of 30 MW coal fired power plant of Binh Duong paper plant;
- ➢ Being EPC contractor in supplying coal handling system (CHS) of 2x600 MW coal fired power plant of Sông Hậu 1 coal fired power project;

#### **NARIME**

#### ESP system of 2x600 MW Nghi Son 2 coal fired power project.



#### Discharge Electrodes for ESP of 2x600 MW Vung Ang 1 coal fired power project.









Internal parts of Thai Binh Thermal Power Plant And Transmission Lines

Constructions Project.



#### EPC contractor for coal handling system of Song Hau 1 Thermal power plant



#### SUPPLY OF DESIGN

Basic design

Detailed design

Technical Services



#### SUPPLY OF EQUIPMENT

Synchronous equipment lines
Single devices
Un-locally fabricated equipment
Fabrication guiding



Capacity of coal storage: 369,418 tons



#### **TECHNICAL SERVICES**

Guiding, inspection of fabrication, erection and commissioning

After sales services

#### Coal handling system of Song Hau 1 Thermal power plant



**Combined stacker reclaimer** 



**Belt conveyor** 



**Installation the CHS** 



**Center control PLC cabinet** 

#### AHS system of 2x600 MW Nghi Son 2 coal fired power project.



# Supplying overhaul service and spare parts for ESP system of thermal power plants in Vietnam (Pha Lai, Uong Bi, ...)



# Designing, integrating temperature automation control system for overheated steam ejection system – Pha Lai



# MOU SIGNING CEREMONY WITH SIASUN ABOUT ROBOTICS & AUTOMATION TECHNOLOGY COOPERATION



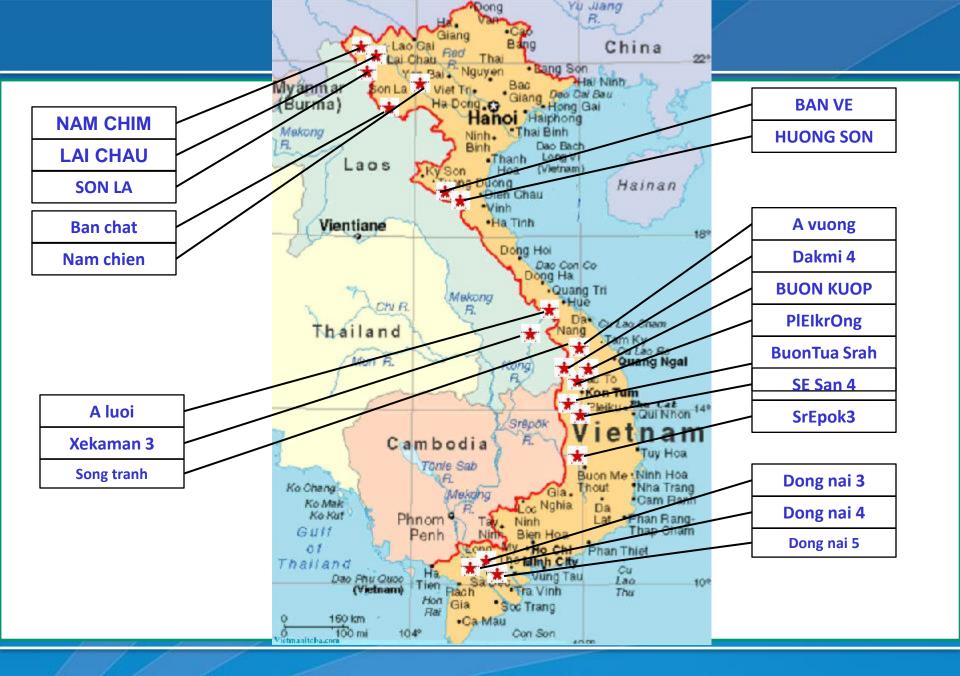
### **HYDRO POWER PLANT**

#### **HYDRO POWER PLANT**

- Narime proposed localization strategy for Mechanical hydro power equipment (MHPE).
- Design and manufacturing Mechanical hydro power equipments for nearly 20 projects with capacity from 120 MW to 2400 MW.
- Design automation control system for small hydro power plants (up to 24 MW).
- Cooperate with Zaporozheygidrostal form Ukraine.

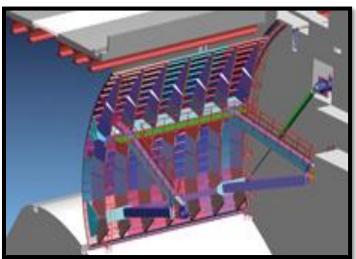
### **Typical projects**

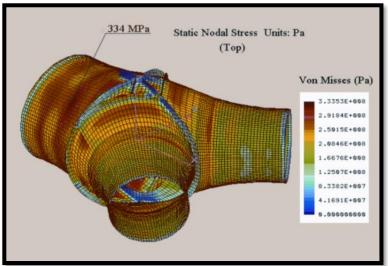
Project	P (MW)	Schedule
Plêikrông	110	2003-2006
Buôn Kuốp	280	2004-2007
A Vương	170	2004-2007
B.Tua Srah	70	2004-2007
Sê San 4	390	2005-2007
Srêpok3	220	2005-2008
Darh'TIH	100	2005-2008
Đồng Nai 3	220	2007-2009
Đồng Nai 4	220	2007-2009
Bản Chát	220	2009-2009
Sonla	2400	2007-2012
Lai Chau	1200	2011-2017











#### **Rubish collector**





#### Rotary bearing for radial gate





#### **Cylinder support**

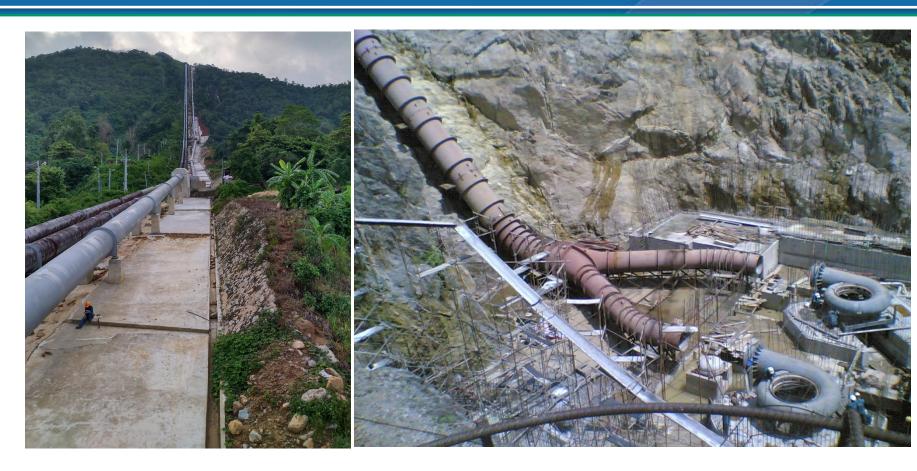


#### Penstock

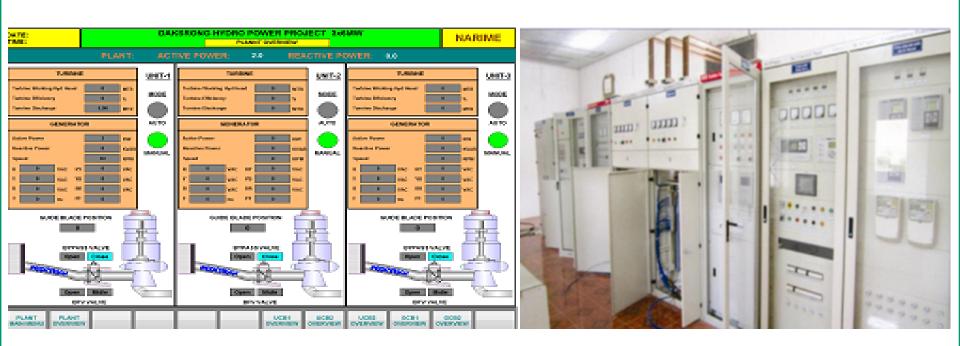




#### **Penstock**



Penstock for Extension Da Nhim hydropower plant project



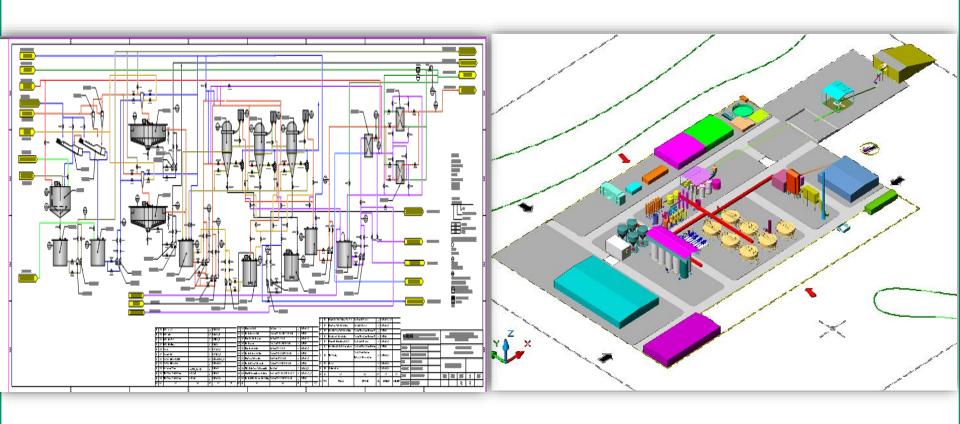
**Electrical and control system for Hydropower plant** 

### **ALUMINA INDUSTRY**

#### **ALUMINA INDUSTRY**

- Narime is the Leader of local companies in localization program of Alumina industry equipment
- Making Feasibility study, Basic design for projects:
  - + Tan Rai: 600.000 t/y;
  - + Nhan co: 600.000 t/y;
  - + Kon Ha Nung: 1.200.000 t/y.
- To be PMC (project management consultant) for Tan Rai and Nhan Co projects.
- Leader of EPC consortium in manufacturing of bauxite ore Washing Plant for Tan Rai and Nhan Co projects.
- Cooperate with Hatch from Australia in Design and supply consultant services.

#### Making basic design and technology calculation for Alumina production lines by SYSCAD software



# Nhan Co Bauxite ore washing plant done by Vietnamese EPC consortium lead by Narime



#### 5 km long conveyor system for Tan Rai project



#### 5 km long conveyor system for Tan Rai project



#### 5 km long conveyor system for Tan Rai project



#### 5 km long conveyor system for Nhan Co project (under commissioning)



# **OTHER INDUSTRIES**

- > Narime proposed strategies for development and localization of cement, pulp and paper industries
- > Having been the leader of local companies in localization programs
- ➤ Acting as an engineering company to receive technologies and responsible for designing and consultant services

#### **New energy industry products**



**Buoy production workshop for Da Mi floating solar power plant project** 



Buoy installation for Da Mi floating solar power plant project

#### Roller Conveyor for Sumitomo Heavy Industries



#### **Belt Conveyor for TABUCHI ELECTRONIC**



#### **Belt Conveyor for YAMAHAMOTOR**



#### **Chain Conveyor for YAMAHA MOTOR**





Automatic washing powder production line



Wood board moisture classification system controled by PLC S7-1200



**Automatic Wheel Mounting Line**with Robots



Jigs for the automotive industry



Packaging system for cement plant

### **Supply Control system for cement plants**



# The first localized 90 meter drilling platform launched in 9-Sep-11, detail design done by Narime



#### 15.000 T/yr pulp mill, DCS controlled



## **Experiment and Inspection**



Material mechanical characteristics experiment



X-ray inspection



Ultrasonic checking



Combining checking

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#### **Partners and Clients**

















































































**SIEMENS TOSHIBA Honeywe** 









### PROPOSE FOR COOPERATION: Design, manufacture, and

supply of equipment for the fields:

- ✓ Energy;
- ✓ Agriculture;
- ✓ Food production;
- ✓ light industry;
- ✓ Mechanics automation,
- **✓** Education.

# Thank you for your time

