



ENERGOINVEST
Rasklopna Oprema a.d.



Reliable partner for Switching Equipment





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Rasklopna oprema a.d. (E-RAOP a.d.)

E-RAOP a.d. nudi svojim kupcima optimalan izbor sred-njenaponskih i visokonaponskih aparata i postrojenja za prenos, distribuciju i upravljanje električnom energijom, kao i projekte "ključ u ruke" na domaćem i svjetskom tržištu.

ISTORIJA I SADAŠNJOST

Istorija E-RAOP a.d. počinje 1954. godine kada je počela proizvodnja opreme srednjeg i visokog napona bazirana na stranim licencama.

Poslujući u sastavu Energoinvesta, jedne od vodećih svjetskih firmi u proizvodnji opreme za prenos i distribuciju električne energije, E-RAOP a.d je svoj zlatni period ostvarila krajem sedamdesetih godina prošlog vijeka.

Zahvaljujući prvenstveno razvoju proizvoda kao i stručnoj kadrovskoj osnovi, zaokružen je vlastiti proizvodni program koji omogućava izvoz u iznosu od 80% godišnje proizvodnje u više od 60 zemalja svijeta.

KVALITET

Kvalitet i pouzdanost proizvoda i usluga iz oblasti elektroopreme koja potpuno zadovoljava zahtjeve, potrebe i očekivanja kupaca, vlasnika, zaposlenih, partnera i društva su sastavni dio poslovne politike Rasklopne opreme.

Politika i poslovni ciljevi ostvaruju se sistemskim pristupom upravljanju kvalitetom prema zahtjevima standarda ISO 9001, njegovim redovnim potvrđivanjem i kontinualnim unapređenjima.

PROIZVODNJA

- Proizvodnja prekidača i postrojenja
- Proizvodnja mjernih transformatora
- Proizvodnja odvodnika prenapona
- Proizvodnja elektrotehničkog porcelana
- Proizvodnja i zaštita komponenti

PROIZVODNJA PREKIDAČA I POSTROJENJA

Razvoj i proizvodnja prekidača i postrojenja nazivnih napona 7,2-420 kV, u raznim izvedbama visoke pouzdanosti i sigurnosti sa minimalnim zahtjevima za održavanje.



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E - RAOP a.d. offers their customers an optimal choice of medium and high voltage switching equipment for transmission, distribution and control of electrical energy, and 'turnkey' projects at local and world markets.

HISTORY AND TODAY

The history of E - RAOP a.d. began in the year 1954 with production of medium and high voltage switching equipment based on foreign licenses.

Operating as a part of Energoinvest, one of world leading factory in manufacturing equipment for transmission and distribution of electric energy, E - RAOP a.d. had its golden period at the end of seventies of the last century. Main orientation of the company was development of new products with its own R&D experts which resulted in original, well balanced production program. That enabled E - RAOP a.d. to export 80% of its annual production in more then 60 countries all over the world.

QUALITY

The quality and reliability of the products and services within a field of switching equipment which completely fulfills requests, needs and expectation of customers, owners, employees, partners and society, are integral parts of E - RAOP a.d. policy.

By systematical approach to quality management that complies with ISO 9001 Standard and the regular certifying and continual improvements of the latter, the policy and business targets are achieved.

PRODUCTION

- production of circuit breakers and switchgears
- production of instrument transformers
- production of lightning arresters
- production of electrotechnical porcelain
- production and protection of components

PRODUCTION OF CIRCUIT BREAKER AND SWITCHGEARS

Development and production of circuit breakers and switchgears rated voltages 7,2 - 420kV in large variety of designs with high reliability, safety and low maintenance requirements.



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Nudimo:

- Projektovanje
- Konsultantsko-tehničke usluge
- Testiranje sredjenaponske i visokonaponske elektroopreme u skladu s nacionalnim i internacionalnim standardima
- Montažu i superviziju
- Servisne usluge s originalnim rezervnim dijelovima i adekvatnom opremom

Proizvodni program

- Prekidači vanjske montaže 38-420 kV u SF₆ izolaciji do 3150 A i do 40 kA
- Metalom oklopljena postrojenja u SF₆ izolaciji 72,5-420 kV, do 2500 A, do 40 kA
- Prekidači unutrašnje montaže u vakuumskoj izolaciji 24 kV, 1250 A, 25 kA
- Prekidači unutrašnje montaže 7,2-38 kV u SF₆ izolaciji i malouljnoj izolaciji 2500 A, 31,5 kA
- Vakuumski zemljospojni prekidači 12 i 24 kV, 2500 A, 25 kA
- Metalom oklopljena postrojenja do 38 kV, do 2000 A sa izvlačivim prekidačima u vakuumskoj, SF₆ ili malouljnoj izolaciji
- Distributivne trafo stanice do 38 kV, do 2000 A, sa fiksnim prekidačima u vakuumskoj, SF₆ ili malouljnoj izolaciji
- Distributivne betonske i blindirane trafostanice 10/0,4 i 20/0,4 kV; 630 kVA i 1000 kVA
- Retrofit malouljnih u vakuumske prekidače
- Uredaji za manipulaciju gasom SF₆

PROIZVODNJA MJERNIH TRANSFORMATORA

Naš vlastiti razvoj strujnih i naponskih mjernih transformatora za naponske nivoe od 0,72 do 420 kV baziran na najnovijim tehnologijama obezbjeđuje vrhunski kvalitet.

Nudimo:

- Ispitivanja prema međunarodnim standardima
- Servisne usluge i reparacije originalnim rezervnim dijelovima i odgovarajućom opremom
- Usluge izrade proizvoda ili dijelova od epoksidnih smola
- Reparaciju provodnih izolatora za energetske transformatore

Proizvodni program

- Suvo-izolovani strujni i naponski mjerni transformatori za unutrašnju montažu 1-38 kV
- Strujni i naponski mjerni transformatori u uljnopapirnoj izolaciji 24-420 kV vanjske montaže
- Strujni i naponski mjerni transformatori u



We offer

- Project activities
- Consulting and technical activities
- Testing of medium and high voltage switching equipment according to national and international standards
- Assembling and supervision
- Service activities with original spare parts and adequate equipment.

Products

- Circuit breakers 38-420 kV, in SF6 insulation, up to 3150 A and 40 kA for outdoor installation
- Metal enclosed switchgears, in SF6 insulation, 72.5-420 kV, up to 2500 A and 40 kV
- Vacuum circuit breaker for indoor installation, 24 kV, 1250 A, 25 kA
- Circuit breakers 7.2-38 kV in SF6 insulation and low oil technique up to 2500 A, 31.5 kA, for indoor installation
- Vacuum earthing circuit breakers 12 and 24 kV, up to 2500A, 25 kA
- Metal-clad switchgears up to 38 kV and 2000A, with drawable circuit breakers in vacuum, SF6, or low oil techniques
- Distributive substations up to 38 kV and 2000A, with fixed circuit breakers in vacuum, SF6, or low oil techniques
- Distributive concrete and metal-clad substations 10/0.4 kV and 20/0.4 kV, 630 kVA and 1000 kVA
- Retrofit of low oil into vacuum circuit breaker
- Devices for manipulation with SF6 gas.

PRODUCTION OF INSTRUMENT TRANSFORMERS

Our own development of the current and voltage instrument transformers from 0.72 to 420 kV based on the modern technology guaranties a high quality.

We offer

- Testing according to the international standards
- Service and repair using original spare parts and adequate equipment
- Production of products and parts made of epoxy resin
- Repair of bushing for power transformers

Scope of production

- Indoor dry-insulated current and voltage instrument transformers 1-38 kV
- Outdoor current and voltage instrument transformers in oil-paper insulation 24-420 kV
- Outdoor current and voltage instrument transformers in



SF₆ izolaciji 72,5 - 145 kV vanjske montaže.

- Strujni i naponski mjerni transformatori u SF₆ izolaciji 72,5 - 420 kV unutrašnje montaže za metalom oklopljena postrojenja.
- Specijalni mjerni transformatori
- Prigušnice

PROIZVODNJA ODVODNIKA PRENAPONA

U proizvodnom programu fabrike imamo jedan osnovni tip metal-oksidnog (ZnO) odvodnika prenapona:

- Tip VH, namijenjen za zaštitu u distributivnim nadzemnim ili kablovskim mrežama od 35-420 kV.

Jednostavna konstrukcija daje pouzdanu, kompaktnu jedinicu smanjenih dimenzija i težine. Sva rutinska ispitivanja obavljamo u našim laboratorijama, u skladu sa ugovorenim standardima.

PROIZVODNJA ELEKTROTEHNIČKOG PORCELANA

Osnovnu djelatnost čini proizvodnja visokonaponskih i sredjenaponskih aparatnih porcelanskih izolatora:

- Izolatori za prekidače i rastavljače
- Provodni izolatori
- Potporni izolatori raznih namjena
- Ostali tipovi

Izolatore glaziramo u smeđu, sivu ili bijelu boju.

Sva mehanička, dielektrična, temperaturna i ultrazvučna rutinska (serijska) ispitivanja izolatora, obavljaju se u tvorničkim ispitnim laboratorijama, što je garancija da svi isporučeni izolatori odgovaraju zahtjevanim karakteristikama.

PROIZVODNJA I ZAŠTITA KOMPONENTI

Obezbeđujemo kompletne isporuke mašinski obrađenih komponenti koje se ugrađuju u naše proizvode. Takođe smo pouzdani snabdjevač komponenti za eksterne kupce.

Nudimo:

- Obradu metala skidanjem strugotine na NC, CNC i konvencionalnim mašinama
- Sječenje materijala (makazama za lim, gasno i plazma rezanje, rezanje tračnim pilama)
- Obradu materijala deformacijom (savijanje, probijanje-prosjecanje)
- Zavarivanje (snopom elektrona, u zaštićenoj atmosferi ručno elektrolučno i elektrotoporno-tačkasto)
- Proizvodnju izolacionih dijelova od araldita livenjem uz podršku vakuuma (gravitaciono i pod pritiskom)
- Farbanje
- Galvanizaciju



SF6 insulation 72.5-145 kV

- Indoor current and voltage transformers in SF6 insulation, 72.5 – 420 kV, for metal clad switchgears
- Special instrument transformers
- Line traps

PRODUCTION OF LIGHTENING ARRESTER

There is one basic type of metal-oxide (ZnO) lightning arrester within the Factory scope of production:

- VH type for protection at distributive above-ground or cable networks 35-420 kV

A simple design provides a reliable and compact unit of reduced dimension and weight.

We precede all routine tests at our labs in accordance with standards agreed upon.

PRODUCTION OF ELECTROTECHNICAL PORCELAIN

The basic activity is production of high and medium voltage porcelain insulators for apparatus:

- Insulators for circuit breaker and disconnecter
- Bushing
- Supporting insulators of various application
- Others

Insulators are glazed in brown, gray or white.

Each mechanic, dielectric, temperature and ultrasound routine (serial) test of insulator is done by Factory testing laboratory what guaranties that each insulator delivered is according to requested characteristics.

PRODUCTION AND PROTECTION OF COMPONENTS

We provide complete delivery of mechanically processed components to be mounted into our products. We are a reliable supplier of components for external customers, too.

We offer

- Metal processing by chipping on NC, CNC and convectional machines
- Material cutting (by nippers for metal-sheet, gas, plasma and saw)
- Material processing by deformation (benting and punching)
- Welding (electron beam welding under protected condition, manually-arc-welding and electroresistant-spot welding)
- Production of insulation parts of epoxy resin by casting through vacuum (gravitationally and under pressure)
- Painting.
- Galvanization.



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