

A Tradition of **Quality**, A tale of **Leadership** Earned:

Poggenamp Nagarsheth Powertronics Pvt Limited has been one of India's leading manufacturers of Laminations for Motors and Transformers for long, and has always stood apart by its own brand of excellence. It is named after two reputed scientists, Poggendorff of Germany and Andre Ampere of France.

Set up by two visionary entrepreneur families (Nagarsheths and Doshis), the company began its journey as a partnership firm in 1982 on a very modest footing. Through its unswerving adherence to quality and state-of-the-art technology and its continual upgrading of capabilities, the company emerged as an industry leader.

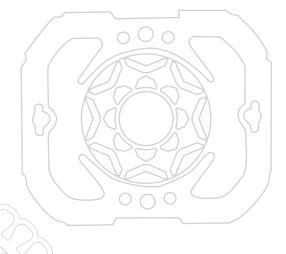
And it continues with this tradition of leadership today.











Mission

To Better the **Best**

- To pool select resources and best-in-class know-how, to be able to manufacture world class products.
- To be forever committed to innovative product development by working hand-in hand with customers.
- To archive organizational growth by providing a professional and rewarding work environment to employees.

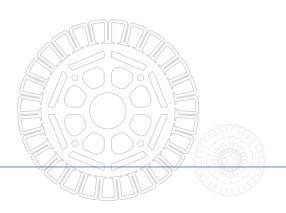
Vision:

Eyeing Tomorrow's World

In the coming years, the Power Sector will witness tremendous growth and subsequently, a 15-year spike is foreseen in the demand for Electric Motors / Transformer in industrial, agriculture, automobile, ballast, UPS etc. This will in turn translate into higher demand for laminations.

Poggenamp aims to capitalize on this and become a significant player in the global market.

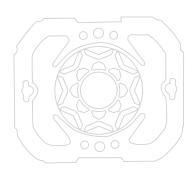
History and Applications

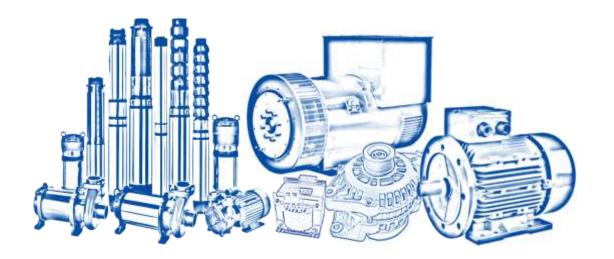


Poggenamp has been manufacturing Strips and El Laminations since its inception (1982).

Poggenamp commenced production of Motor Laminations in 1986 with 6" (137 mm) submersible pump motor configuration. Development of a vast range of designs followed, augmented with the usage of whole spectrum of electrical steel grades.

Its product range finds applications in Generators, Alternators, AC / DC / Lift-duty Motors, Traction Motors, Submersibles Pump Motors, Domestic Pump Motors, Aeronautics, Automobiles, Current Transformers etc.









Product Range







Poggenamp manufactures wide range of motor and transformer laminations with comprehensive solutions. It manufactures laminations from various grades of CRNGO and Semi-Processed electrical steel sourced globally.

Employing conventional three stage manufacturing practices for batch production by gang punching, notching / indexing upto 1200 mm diameters and high-speed punching for serial production. Total solution in terms of stacked stators by various processes like cleating, riveting and welding. Pressure Aluminum diecasting of rotors, the company offers comprehensive lamination solutions.

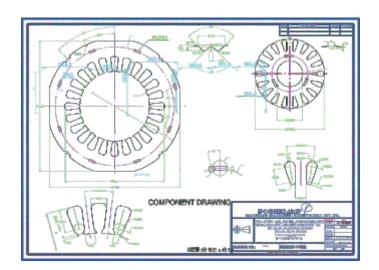
Poggenamp successfully caters to a wide range of applications, entailing varied manufacturing processes. EI/UT/TL laminations are manufactured as per Imperial & DIN standards. For Ballast application, El/UT/TL laminations are offered with various air - gap cuttings as per customer specification. Non-standard designs also are manufactured to meet customer requirements. Bobbins, Clamps and Brackets for standard and non-standard laminations are outsourced.

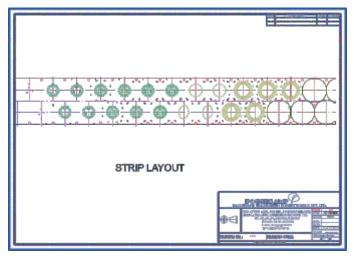
For rectangular strip laminations, CNC Cut-to-Length (CTL) lines capable to accommodate lengths up to 2500 mm and widths up to 200 mm with multiple hole options are employed. Both shearing and hole piercing is aided by carbide tool, ensuring the highest possible stacking factor.

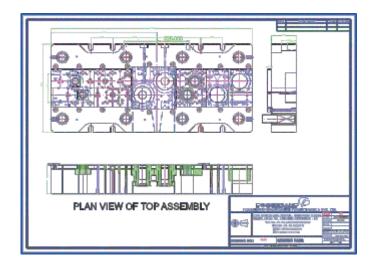
All the products adhere to international standards.

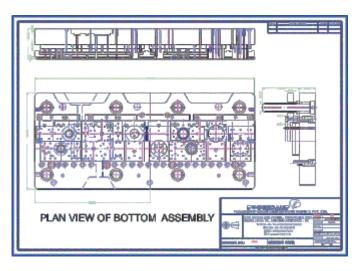


Poggenamp has comprehensive in-house facilities, including CNC Turning, EDM Wire-cut, Milling, Drilling, Grinding & Hardness testing equipments and various other equipments. Tool Steel is sourced from Bohler, Austria and Assab, Sweden. A full-fledged team of qualified personnel ensures optimization of design parameters on CAD/CAM. Carbide tools are sourced from Taiwan and China.









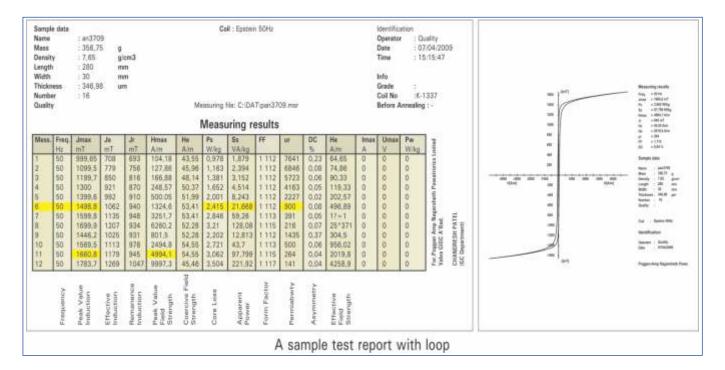


Poggenamp sources prime CRNGO directly from mills of global repute. A wide spectrum of grades as per BIS - IS 648 norms, in coils of up to $1300\,\mathrm{mm}$ width and $20\,\mathrm{MT}$ weight, are imported. These grades range from NO 20, 35C250 to 65C1000 and FeP01 or Semi-Processed Electrical Steel are used where such materials are required.

The standard coating offered is C-6 and superior grade coatings (C-9) are also processed. All grades are available exstock in varying quantities.

Batch of input coil is tested on Dr Brockhaus Epstein Frame and records maintained for the traceability of every supply. The ceiling on deviation accepted as standard practice is within 3% of the certified test results.









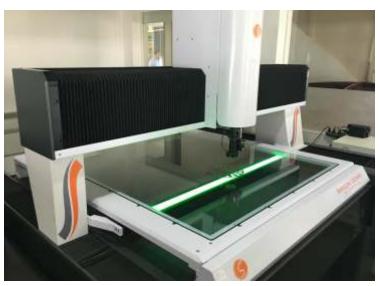
Epstein frame



Epstein frame with stator core tester



Franklin tester



Optical CMM



Quality Assurance



An ISO 9001:2008 and ISO/TS 16949:2002-compliant organization, Poggenamp has world class testing equipment, enabling the company to offer its customers zero-defect products.

All electrical parameters of steel are determined through a Dr Brockhaus Epstein Frame - an essential and indispensable data for a designer of electric motors / transformers.

Optical co-ordinate measuring machine (OCMM) determines the dimensional accuracies of tools and laminations.

Also featured is Rotor Analyzer, the ultimate instrument to check the quality of die-cast rotors (for in house quality development) as well as a stator analyser to check the properties in stacked conditions.

A host of other instruments - both digital and analog — are employed for quality checks before, during and after production.

Every dispatch from the plant is authenticated with requisite electrical parameters, dimensional reports charted out against the specifications and any other parameters required by the customer.



Slitting line



Press shop



Planning and Manufacturing

Production

Slitting:

A state-of-the-art twin loop line ensures stress-free and accurate slitting. The standard slit tolerances are: \pm 0.05 to \pm 0.075 mm. Up to 16 slits can be accommodated at a time.

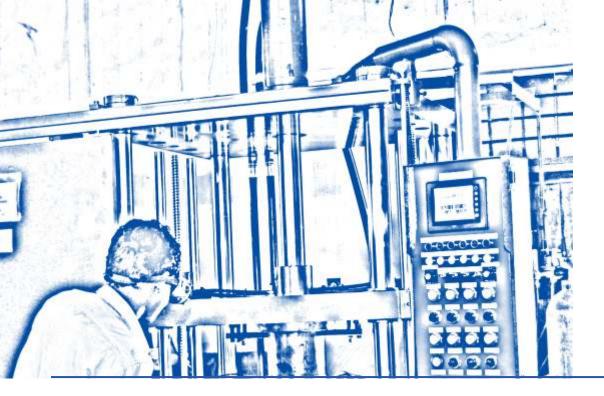
Press shop:

Conventional pneumatic presses ranging from 16T to 150T are used for batch production, involving blanking, stator and rotor gang punching. Presses ranging from 160T up to 400T, suitable for blanking of circles and segments up to 1200 mm and gang slotting of blanks up to 1200 mm diameters, are used. A 400T press has been designed to punch sectors / segments up to 2000 mm radius. All these presses (ranging from 160T to 400T) are equipped with uncoilers (1250 mm coil width and 7 MT coil weight), straighteners and servo feeders for precise blanking and gang punching.

Notching machines of both domestic and imported make accommodate blanks up to 1200 mm diameter. The range is from 2T up to 10T. These PLC controlled machines are capable of indexing skewed stator / rotor and skip notching.

High speed presses ranging from 32T to 360T offer speeds up to 700 SPM. These are capable of accommodating Tungsten Carbide toolings. A stamping controller ensures stator rotation, auto skewing of rotor and multiple shaft bore punching.

To support the grinding of tools within high tolerance levels, surface grinders with chuck sizes of 200 x 150 to 2500 x 1200 mm. This ensures in-house maintenance of tools with optimum tool life.





BAB type furnace



Aluminium pressure die casting



Processes:

Annealing:

Annealing enhances permeability and lowers core-losses and apparent power. This facility has been designed keeping specific applications required by customers. The batch-type pit furnace features PLC control and nitrogen generator. Both CRNGO and Semi-processed Electrical Steel laminations can be annealed / decarburized with capacities up to 5 MT per day. Additionally another state-of-art, BAB type continuous annealing line featuring burning / annealing / bluing capabilities processes laminations up to 16 M.T per day.

Stacked Stators / Die-cast Rotors:

Total flexibility is offered for riveting / cleating / welding / auto stacking (inter lock) as required per application, when none of this application is required then we have option of self bonded stator stacks. Customers can also order loose

laminations as per requirements. Rotors are auto skewed on a vertical skewing machine, to ensure consistent and correct skew angles. Vertical pressure die casting machines with capabilities ranging from 75T to 250T can die cast rotors of the smallest size up to 400 mm diameters and core-lengths up to 500 mm. Aluminum of standard EC grade is the basic raw material. However, depending upon customer's requirements, other grades (AISi 12, etc) can be offered.

Stator winding as per data, wound with hand or by machine depending on the quantities. Rotor shaft insertion as per hot or cold pressing method and machining on CNC turning.



Packing and Dispatch





Pre fumigated wooden box



VCI paper wrapping



In house container stuffing

Poggenamp has its own, well-evolved packing systems with the flexibility to offer customized yet practical solutions to its customers. Wooden pallets / boxes and corrugated boxes wrapped with thick PVC covering are used in packing. Laminations are either stretch-wrapped or VCI covered and packed in thick PVC sheets. Finally, this is placed on the pallets or wooden boxes and strapped with steel / plastic straps. The pallets / boxes are fumigated as per international norms, before stuffing into the containers ready to be despatched for the final destination.

Poggenamp works with established logistic companies to ensure efficient consignment tracking and minimum trans-shipment delays for international destination.



Poggenamp's main future objective is to promote export of Electrical Laminations for all types of Static & Rotating Machines to global markets, and to strengthen business relationship with customers.

Poggenamp is also recognised as an EXPORT HOUSE by the Ministry of Commerce and Industry, Government of India.



