



ENGINEERING
EXCELLENCE WITH
EMINENT TECHNOLOGIES



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- ❖ In today's competitive world innovation use of technology and change in better way is must for any organization.



- ❖ If we look at history of steel price it is increasing which impacts our business so instead of using lap splicing in construction we can use couplers for our TMT bar connection. Lap splicing requires $50 \times$ dia of rebar for load transfer so steel wastage is reduced using couplers. Usage of binding wires and difficult handling is avoided.
- ❖ Traditional method of lapped joints are not always an appropriate means of connecting reinforcing bars. lapped joints are dependent on concrete around it to transfer load.



- ❖ Due to lap splicing congestion is the biggest drawback for load transfer from one bar to other as congestion makes poor compaction of the concrete structure which compromises load capacity of bars.
- ❖ Lap splicing has poor cyclic performance compared to mechanical splicing.
- ❖ Lap splicing involves time consuming calculations, possible calculation mistakes and overestimating.
- ❖ However use of coupler is superior in its load transfer as compared to lap splicing as it creates a direct mechanical connection between 2 bars that is similar in its behavior to a continuous reinforcing bar, so continuous load path is created from one bar to another that is independent of condition and quality of concrete.
- ❖ Thus congestion is avoided using couplers in structure which makes smooth flow of concrete during pouring and hence sound structure integrity is achieved.
- ❖ Couplers can be installed as provision of future extension so huge amount of concrete breaking is avoided for extension





- ❖ Staggering of bars not required while using rebar couplers.
- ❖ Couplers used as replacement to dowel bars which also saves formwork material.
- ❖ Couplers due to their high tensile strength can withstand earthquake more easily than lap splicing.
- ❖ It increases column shear load capacity.
- ❖ The assembly process is very simple

1. The 2 rebars to be joined are supplied with their ends threaded along with relevant coupler.
2. The coupler is screwed onto the member which is already fixed.
3. The free rebar is now screwed onto the coupler using wrench and the assembly is ready.

❖ In today scenario time is everything many government norms pressurize to complete projects within given time limit so use of rebar couplers accelerates construction schedule within low cost with efficiency.

❖ Our coupler manufacturing plant is located at SACHIN GIDC ,SURAT.

❖ Area of our plant is 4000 sqft.

❖ All the couplers are manufactured within the plant with all the accuracy on CNC machines. Automated machines help us achieve all the requirement to fulfill coupler manufacturing as per standards.

❖ We use high grade EN8 D material to produce couplers.

❖ As soon as we receive material we send material to check for its chemical, mechanical and inclusion testing to NABL approved laboratory.

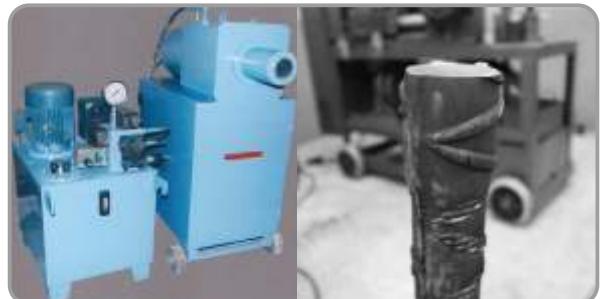
❖ Then we cut material on band saw machine as per requirement of length.



- ❖ Then we make program on our automated CNC machines to make drill bore and threads. We have CNC machines which we run day and night to full fill requirements of our clients.
- ❖ We check each and every coupler with thread gauge to maintain GO and NOGO. Our priority is to give best product to our clients.



- ❖ After all the quality check we make punching on each coupler for future traceability. We mention our company name ,size of coupler and heat no. than we supply to location as per requirement of clients.
- ❖ At site Rebar end needs to be cut perpendicular prior to thread which is in the client scope.
- ❖ After cutting is done we enlarge the bar end under hydraulic pressure
- ❖ Once forging is done we make threading on forged bar as per our standard coupler so that coupler can easily fit on threaded rebar.



- ❖ Our couplers follow the worldwide standards of AC133, ACI (AMERICAN CONCRETE INSTITUTE) 318, IS16172:2014 IS 1608 : 2018.
- ❖ According to above standard tensile strength of mechanical splice for grade (Fe 500D) Should be 565 N/mm^2 .



**" CONTINUITY
OF REINFORCING BAR IS AN ADDED
VALUE IN THE STRUCTURES THAT ARE
GOING TO BE LIVED IN."**

**"CHANGE IS HARD AT THE FIRST,
MESSY IN THE MIDDLE
GORGEOUS AT THE END"**

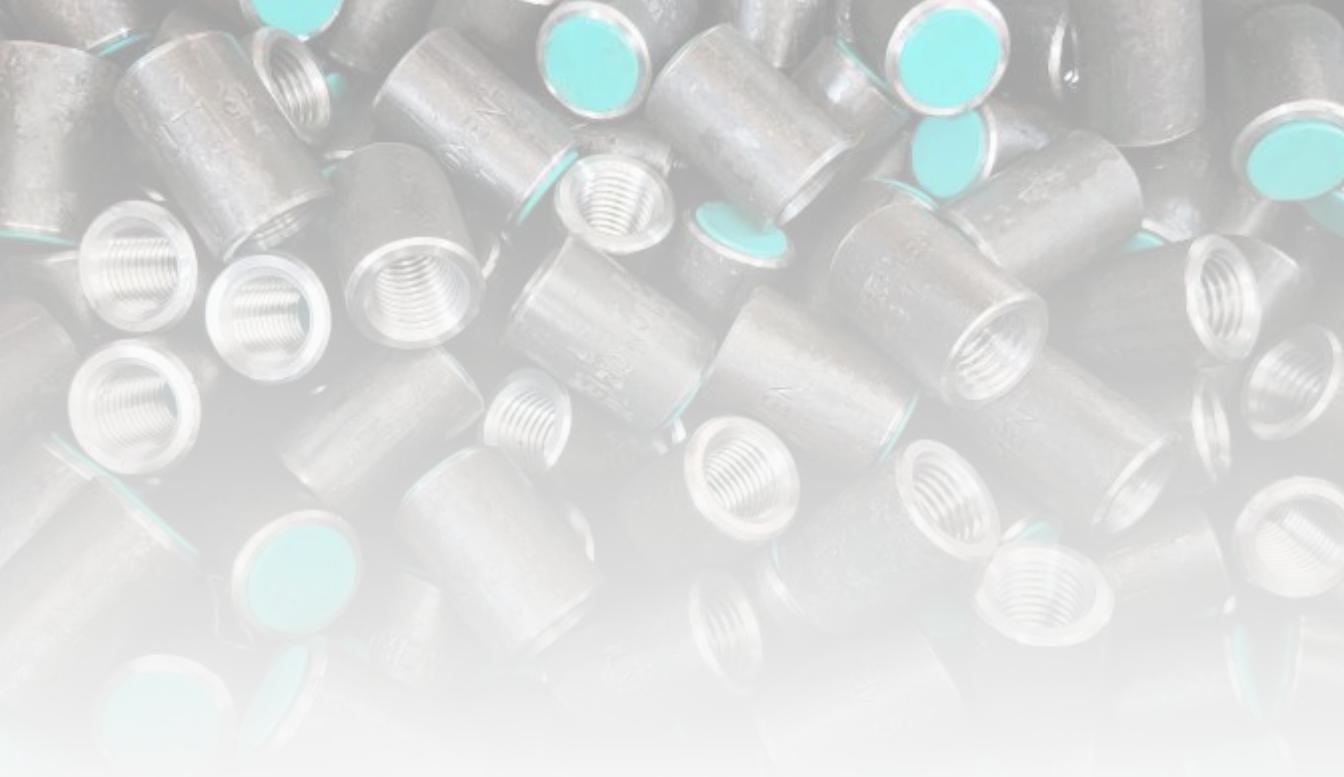
COUPLER SPECIFICATIONS

DIA	O.D	LENGTH	PITCH
16	25	40	2.0
20	32	48	2.5
25	42	60	3.0
32	50	72	3.0
36	60	86	3.0
40	63	96	3.0

Application of couplers as under

- ❖ Dam | Metro | High rise | Airport | Bridges | Storage tanks | Nuclear power plant





GUJARAT

Factory: Plot No. I/9, Sachin Gidc Road No. I/1, Opp.
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MUMBAI

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