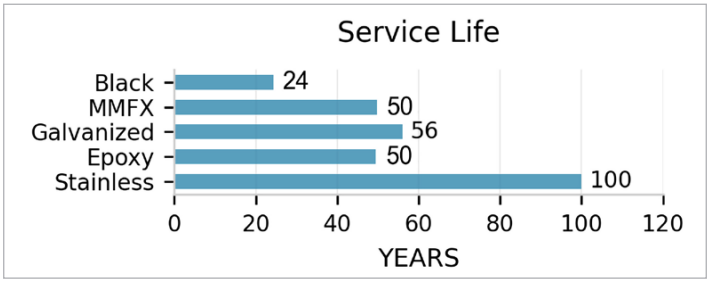
The last rebar you will need

STAINLESS STEEL REBAR

Build Once. Build Right. Build Stainless

THE CORROSION RESISTANCE STANDARD

- Unsurpassed Durability – A class of its own
- 100+ years of Service Life – 2X to 4X more than other rebar
- No rehabs / major repairs for 100 years
- Initial Savings – Less cover, mix design, reduced overlays



No rehabs → No traffic congestion → Open roads

Construction Savings + Avoided Repairs/User Costs + Higher Hwy Uptime =

Significant Lifetime Savings and Lowest Life Cycle Cost

PROOF OF DURABILITY: Progreso Pier since 1941

- Built in 1941 in the Gulf of Mexico. Still operational today. *Proof of long-term service life.*

A pier built with carbon steel in 1969 shown in the foreground disintegrated in 20 years.

CHEMISTRY MATTERS – What makes it Effective?

- Choosing the right type of corrosion resisting alloys
- Precisely balanced levels of these alloys
- Cr content well above the min. "critical" threshold of 10.5%
- Above 10.5%, Cr forms a durable and stable passivation layer against corrosion
- Ultra-low carbon <0.03% = No carbides to impair corrosion resistance

Chromium Cr
Nickel
Molybdenum
Nitrogen
Manganese

Alternatives include FRAGILE RESIN or SACRIFICIAL METAL-COATED Black Bar, or High Carbon uncoated Black Bar with insufficient chemistry to do the job.

INDEPENDENT TESTING Confirms "Best in Class" Performance

- The material has been thoroughly tested by independent researchers applying accepted electrochemical testing procedures.
- All "non-vested interest" studies rank stainless steel as "Best in Class", without equal.

Studies available upon request

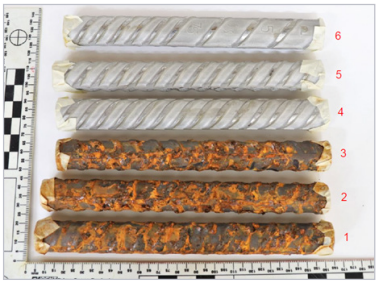


Photo of samples after 96 hours of salt spray exposure

A little bit of Cr means a little bit of corrosion resistance!

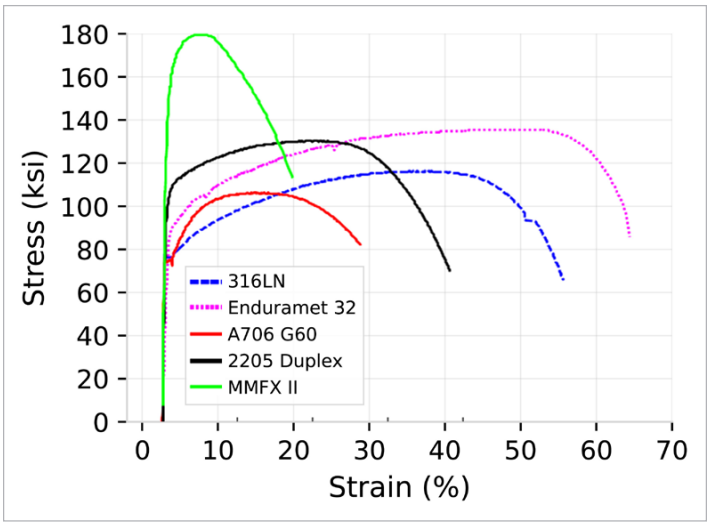
Only Stainless Steel offers permanent corrosion resistance – others simply delay the inevitable

ASTM A955: Stainless Steel Rebar Standard

- Concrete reinforcement bars for
  – corrosion resistance,
  – restricted mechanical properties (seismic), and
  – controlled magnetic permeability (stray current).
- Two alloy classifications – austenitic and duplex.
- Only A955 has a corrosion resistance qualification test.
- High strength – a grade structure up to 80 ksi allowing for material savings.
- Controlled mechanical properties
  – max/min yield for seismic applications.
- Exceptional ductility vastly exceeding all other rebar – twice the Fu/Fy.
- Vastly superior low temperature "toughness", i.e. Charpy values.
- Excellent fatigue resilience.
- Mechanical properties are maintained in high and cold temperature climates.

Seismic Benefits

Stainless Steel Exceptional Ductility

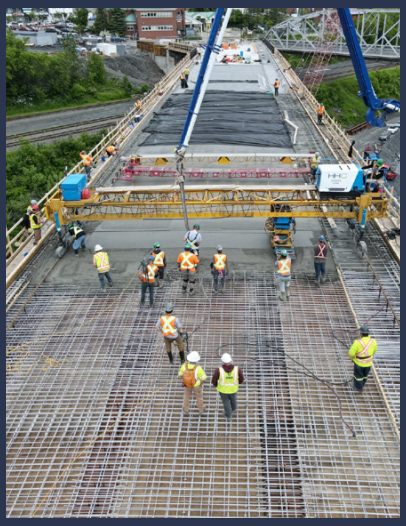


U. of Buffalo Stress-Strain Results for Monotonic Tension Test

The unmatched properties make stainless steel rebar an exceptional performer for extended service life in various structural applications.

APPLICATIONS

- Corrosion Resistance: Bridges, Tunnels, Marine Structures, Parking Structures, Mines
- Magnetic Resource Imaging
- Light Rail Transit
- Seismic Design
- Liquid Natural Gas



FABRICATION and HANDLING

- The Standard ANSI IPG 4.1 describes standard practice for fabrication quality processes of A955 products.
- The equipment and fabrication procedures follow those for conventional rebar.

CRSI

AVAILABILITY

- The SSIG members have an inventory of the commonly used alloys in all the conventional bar sizes.
- Stainless steel rebar is available as customized cut and bent fabricated material or as stock material.

Contact us for information on how stainless steel rebar can provide the best value for your project

SSIG
Stainless Steel Interest Group

Stainless Steel Interest Group
Contact :
Richard Huza, PE
rickhuza@gmail.com
Mobile: 514 208 5335
www.stainlessrebarassociation.com

CMC Contractors Materials Company

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