



From Redesign to Delivery: The 70.6 MVA Coil Project That Redefined Precision

Some projects test your limits. Some transform them.

The **70.6 MVA** project was one such defining journey for Coral where design met complexity and execution met excellence.

Scope of work

- Manufacture & supply of 99 fully cured resin-rich turbo bars
- All Class F materials
- 12-month performance guarantee
- Final destination: Pulp Factory in Brazil

Bar configuration

- 7.87mm × 2.03mm insulated conductor
- 80 conductors per bar (40+40)
- 360° Roebeliling
- Brazed end lugs
- 4-meter bar length

At first, it looked like a routine high-voltage coil order. But during fixture design and simulation, we spotted something...



Critical Redesign

Our engineers discovered a major technical challenge in the original bar design.

Instead of fitting the old mold, we:

- Reimagined the bar profile
- Custom-built new fixtures
- Got customer approval for the new design

What changed?

- Bar profile

It was collaborative problem-solving.

Quality. Proven. Live.

As part of a special customer requirement:

- 100% of bars underwent live inspection on Microsoft Teams
- Entire testing process was video recorded and submitted

Final Tests Included

- Dimension checking
- Inter Element test at 220V AC
- Before AC HV test Insulation resistance at 5000V as per IEEE 43:2000
- AC HV Test at 41 kV for 1 min
- After AC HV Test Insulation resistance at 5000V as per IEEE 43:2000.
- Tan delta test @ 1.2 times of rated voltage at step of 0.2un as per IEEE 286:2000



- Surface Resistance Measurement (Limit below $5\text{k}\Omega/\text{Square}$)
Conductor resistance measurement.
- Partial discharge test for 100% of the bars at phase voltage @ 8 kV

Every bar. Verified.



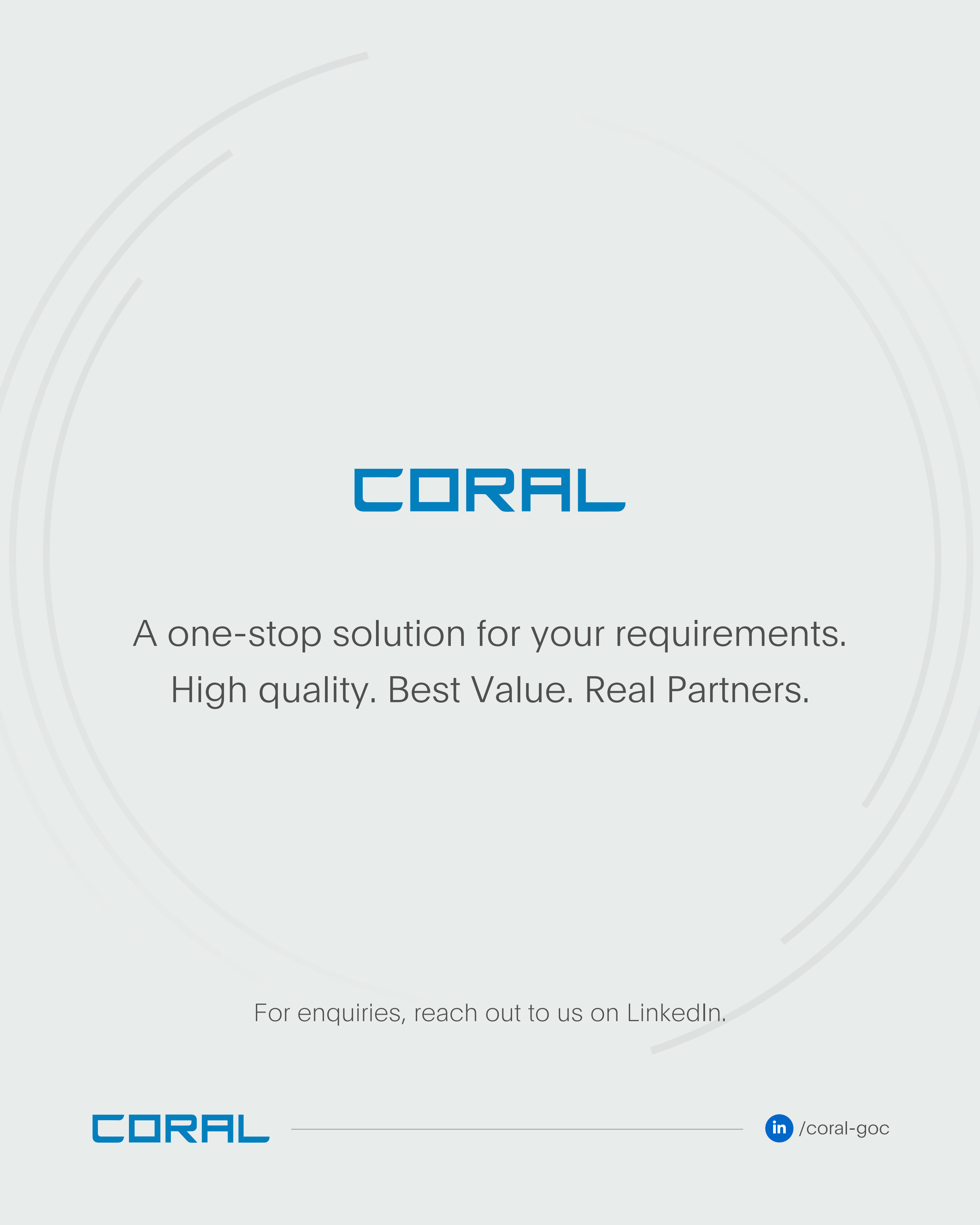
Outcome

- Design change? Approved
- Fully compliant with customer specs
- Every test passed. Every parameter exceeded
- 100% core inspection? Done live

For us, this project was more than just an order

It was a story of:

- Agility
- Precision
- Innovation
- Excellence



CORAL

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High quality. Best Value. Real Partners.

For enquiries, reach out to us on LinkedIn.

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