

DANA STEEL INDUSTRY LLC



2022

Aluminum Cladding
Catalog

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DANA STEEL INDUSTRY LLC

DANA Steel UAE has its state of the art Cold Rolling Mill Complex (CRM Complex) Situated in DIC,Dubai Industrial City Park (Strategically Situated just 35 kms from Jebel Ali Sea Port) from and its Marketing Head Quarters in Dubai (Situated 4 kms from Dubai International Airport).Our Products are Proudly“MADE IN UAE” and exported to GCC(Gulf Cooperation Council) Countries,Middle East,Africa,America and Europe.

RWe are Part of Well Re-knowned Industrial Conglomerate DANA GROUP (www.danagroups.com). Since 1991 our Group has been headquartered in Dubai UAE,and has expanded across Africa,UAE and Asia.The Group has diversified interests in Steel,Oil,Retail,Healthcare and Hospitality.

ALUMINUM ROLL JACKETING (CLADDING)

DESCRIPTION

DANA Coatings provide the best aluminum roll jacketing cladding for mechanical insulation systems such as storage tanks, vessels, and pipes. This solution is comprehensive and highly durable, protecting your pipes, vessels, and tanks from physical damage, UV exposure, and corrosion. We offer three types of finishes: smooth, stucco, and embossed. You can also choose our box rib and deep corrugated aluminum sheets if you have a large tank or pipe. To make the jacketing durable and achieve a high level of finish, the outer surface is covered with a 3-millimeter thick polyfilm moisture barrier.

COMPOSITION

Roll jackets are best made out of soft graded aluminum. When soft aluminum is alloyed with manganese, copper, silicon, zinc, and magnesium, its strength parameter increases. At DANA Coatings, a strong cold working mechanism is applied. We use either the 3105 or the 3103 alloys since they are highly compatible and have excellent corrosion resistance. Additionally, it has better insulation properties. DANA Coatings offers a variety of compositions. Our experts will suggest and guide you based on the weather conditions or whether they are to be used domestically or commercially.

COMPOSITION DIFFERENCES IN ALUMINUM ALLOYS (%)

Alloy	cu	Mn	Mg	Zn
3105	< 0.3	0.3 - 0.8	0.2 - 0.8	< 0.4
3003	0.05 - 0.2	1 - 1.5	-	< 0.1

COMPLIANCE TO STANDARDS

At DANA Coatings, aluminum roll jacketing is performed according to industry standards as outlined in ASTM C-1729. The strength and the chemical composition areas per the ASTM B 209 process.

RECOMMENDED USES

We recommend this procedure to all clients whose tanks or vessels have a diameter less than 8 feet.

LIMITATIONS IN USE

Due to some limitations, we do not recommend this process to all clients, depending on their conditions and requirements.

ALUMINUM ROLL JACKETING (CLADDING)

The limitations are-

In most cases, it is best to use this method if the diameter of the tank or vessel is less than 8 feet. Exceed this and it's better to use deep corrugated aluminum sheets. This is also not the ideal solution for increased emissivity. You'd be better off using painted aluminum jacketing for this. You should employ the stainless steel jacketing process for greater fire resistance.

POLYFILM MOISTURE BARRIER

A co-extruded film made of polyethylene and surlyn polymers is used in the highly engineered process known as PFMB, or polyfilm moisture barrier and PSMB (Polysurlyn Moisture Barrier). The film is heat laminated on the internal surface of the aluminum jacketing and has a total thickness of 3 mil. DANA Coatings advises using PFMB because it eliminates crevices and cracks, adds aesthetic value, and boosts the effectiveness of the entire insulating system. suggested thickness At DANA Coatings, we typically adhere to the norms and procedures outlined in the industry standard operating procedure ASTM C-1729.

EMITTANCE

According to ASTM C 1371's industrial guidelines standard process, the emittance is measured. The bare aluminum jacketing has an emittance of 0.1.

SURFACE FINISHES

We provide three different finishes to satisfy the wants and demands of each client.

1. Smooth (Plain Mill) Finish

2. Stucco Embossed Finish

3. 3/16" Corrugated Finish

Please remember that, if the customer so requests, PFMB paint can be applied on the outside surface of all finishes.

SMOOTH FINISH OR THE PLAIN MILL FINISH

It is the appearance that is acquired once the operation is complete. This is the greatest option for people who prefer a plain, tidy finish. Keep in mind that it has the best ability to shed rainwater. However, if it is subjected to hailstorm circumstances, it might not last very long. The flat surface makes it easier for debris to accumulate. When erected close to busy roads and highways, it also has a high reflecting glare and poses a safety danger.

STUCCO EMBOSSED FINISH

For individuals who require a repair of the scuffs and physical flaws years after installation, the stucco embossed finish may be beneficial. Additionally, this can significantly lessen the surface's reflecting glare. Stucco and embossed finishes can help make the aluminum jacketing more rigid and strong.

3/16" CORRUGATED FINISH

The pipe features parallel grooves that span their whole length. Along with lowering reflecting glare, it also conceals all flaws and dings on the pipe's or vessel's exterior surface.

Additionally, it increases the jacket's ability to expand and adjust to temperature fluctuations. This variant's strong strength and stiffness make it suitable for big tanks and vessels with a diameter of up to 8 feet.

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FLAMMABILITY

At DANA Coatings, we performed the ASTM E 84 process-compliant industrial standard technique for the 3 mm polysulryne moisture coating flammability test. The outcomes display the following information. ASTM E 84 has a zero flame spread index. Smoke-developed index of ASTM E 84 smoke-developed index- 5

Outer Insulation Diameter (in)	Minimum Aluminum Jacket Thickness, inches (mm)	
	Rigid Insulation	Non- Rigid Insulation
< 8	0.016 (in) (0.41(mm))	0.016 (in) (0.41(mm))
Over 8 thru 11	0.016 (in) (0.41(mm))	0.020 (in) (0.51(mm))
Over 11 thru 24	0.016 (in) (0.41(mm))	0.024 (in) (0.61(mm))
Over 24 thru 36	0.020 (in) (0.51(mm))	0.032 (in) (0.81(mm))
>36	0.024 (in) (0.61(mm))	0.040 (in) (1.01(mm))

