



SEVEN DIAMONDS Ind. Co.

Manufacturer of Hot Dipped Galvanized, Pre-painted, Galvalume,
Cold Rolled Coil and Sheet

Galvalume steel 



SEVEN DIAMONDS Ind. Co.

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Seven Diamonds.Ind.Co (Private Joint Stock)

Seven Diamonds Industries Company, focused to produce corrosion resistant coated steel products, commissioned another Hot Dip Galvanizing Line in 2016 for adding Galvalume Products to its already wide range of coated steel products.

The nominal capacity of this production line is MT 350,000 annually with the thickness range of 0.2–1.25 mm and width range of 700 –1275 mm. The line has the flexibility to produce Galvalume Strip with different spangle sizes (from zero to medium) and coating weights (60-200 gram per square meter).

Product Information: Galvalume

Nowadays, the industry’s attention has shifted towards Galvalume Products (Aluzinc and 55% Al-Zn as it is also known) due to its life expectancy against oxidation and corrosion. The coating used is composed of 55% Aluminum with the balance mainly Zinc. This chemical composition benefits from the Galvanic Peal resistance of Zinc metal added with the bending flexibility and Scratch/Corrosion resistivity of Aluminum metal.

Technical specifications of Galvalume Product

Production Method	Continued Hot Dip
Thickness Range	0.2 – 1.25 mm
Width Range	700 – 1275 mm
Coating weight of Galvalume	60 – 200 g/sq m
Internal diameter Coil	508-610 mm
External diameter Coil	850 – 2100 mm
Type of surface Range	Chrome Coated + anti-fingerprint (Optional)
Spangle Type	zero spangle, small spangle, minimum spangle
Production capacity	350,000 MT/y

Galvalume Steel





Mechanical Specification Table

Classified Symbol	Yield Point or Proof Stress N/mm ²	Tensile Strength N/mm ²	Elongation %					Test Piece and Direction of Tensile Test
			Nominal Thickness mm					
			0.25 or over to and excl. 0.40	0.40 or over to and excl. 0.60	0.60 or over to and excl. 1.0	1.0 or over to and excl. 1.6	1.6 or over to and excl. 2.3	
SGLCC	(250 min.)	(270 min.)	(20 min.)	(21 min.)	(24 min.)	(24 min.)	(25 min.)	No. 5, in Rolling Direction
SGLCD	—	270 min.	—	27 min.	31 min.	32 min.	33 min.	
SGLCDD	—	270 min.	—	29 min.	32 min.	34 min.	35 min.	
SGLC400	295 min.	400 min.	16 min.	17 min.	18 min.	18 min.	18 min.	No. 5, in Rolling Direction or Perpendicular to the Rolling Direction
SGLC440	335 min.	440 min.	14 min.	15 min.	16 min.	18 min.	18 min.	
SGLC490	365 min.	490 min.	12 min.	13 min.	14 min.	16 min.	16 min.	
SGLC570	560 min.	570 min.	—	—	—	—	—	

Coating Weight Table

Coating Mass Symbol	Average Minimum Coating Mass in Triple-Spot Test gr/m ²	Minimum Coating Mass at a Single Spot gr/m ²
(AZ70)	70	60
AZ90	90	76
AZ120	120	102
AZ150	150	130
AZ170	170	145
(AZ185)	185	160
(AZ200)	200	170



Advantages of Galvalume Coating

- Four times the strength in Corrosion resistance in comparison to equally galvanized coated thickness under the same weather condition
- Strong corrosion resistance for Cut Edge Protection
- Excellent visual surface quality and gloss aside from uniformly small spangles
- Great surface reflection for insulation purposes in constructive and decorative applications
- High thermal resistance without sacrificing the coating appearance

Chemical Composition, Mechanical Property and Coating weight

Galvalume Products are offered based on chemical composition of base plate, mechanical properties of the finished product and the coating weight of Galvalume. The following tables have been prepared to represent the variety of Products available according to JIS G3321 Standard. Customers could also select from ASTM A792 American standard as well as INSO 18863 National Standard.

Chemical Composition Table (JIS G 3321 standard)

Classified Symbol	%C	%Mn	%P	%S
SGLCC	0.15 max	0.80 max	0.05 max	0.05 max
SGLCD	0.10 max	0.45 max	0.03 max	0.03 max
SGLCDD	0.08 max	0.45 max	0.03 max	0.03 max
SGLC400	0.25 max	1.70 max	0.20 max	0.05 max
SGLCC	0.25 max	2.00 max	0.20 max	0.05 max
SGLCC	0.30 max	2.00 max	0.20 max	0.05 max
SGLCC	0.30 max	2.50 max	0.20 max	0.05 max



Corrosion Resistance of Coating

Galvalume Products Excel in resistance against corrosion by at least three times in comparison to regular Galvanized Products in all environments. The following table shows the result of this comparison between Galvalume and Galvanized Coating in different corrosive environments.

Comparison of life time of Galvanized sheets and Galvalume sheets under different climates according to ISO 9224 standard and Iran corrosion database														
Galvalume sheets						Galvanized sheets								
AZ 180	AZ165	AZ150	AZ120	AZ110	AZ100	Z27	Z25	Z22	Z20	Z18	Z12	Code of standard coating according to JIS 3302		
180	165	150	120	110	100	270	250	220	200	180	120	Minimum coating weight (gram / sq m)		
48	42	40	32	30	27	38	35	31	28	25	17	Minimum coating thickness (micron)		
874.3	804.5	760	700	620	560	380	350	310	280	250	170	Minimum passed time of salt fog up to 5 % of red colour		
Sheet life time according to year												Division of country climate according to ISO 9224 standard		
73.2	67.2	63.3	58.1	51.2	46.0	31.7	29.1	25.6	23.0	20.4	13.4	Ardebil	C3	
												Ahwaz		
												Tabriz		
												Tehran		
												Semnan		
												Shiraz		
												Qazvin		
35.3	32.3	30.3	27.7	24.3	21.7	15.2	13.9	12.1	10.8	9.5	6.1	Kerman	C4	
												Kermanshah		
												Isfahan		
												Oroumieh		
16.4	14.9	13.9	12.6	10.9	9.6	6.9	6.3	5.4	4.8	4.1	2.4	Bandar Abbas	C5	
												Boushehr		
												Sari		
												Chabahar		
												Rasht		
													Anzali	
													Qeshem	



Product Supply Specification

Galvalume products	
Coil	Weight: 3 – 25 tons / thickness: 0.2 – 1.25 mm / Width: 700 – 1275 mm
Sheet	Maximum Strip Length: 3200 mm / Strip Width Range: 700 – 1275 mm
Sinusoidal and Trapezoidal Profiles	Input Strip Width: 700 – 1275 mm / Output Profile Width: 773 -1185 mm and Strip Thickness Range: 0.2 – 1.25 mm
Slit	Strip Thickness Range: 0.2 – 1.25 mm / Minimum Strip Width: 30 mm

Application in Various Industries

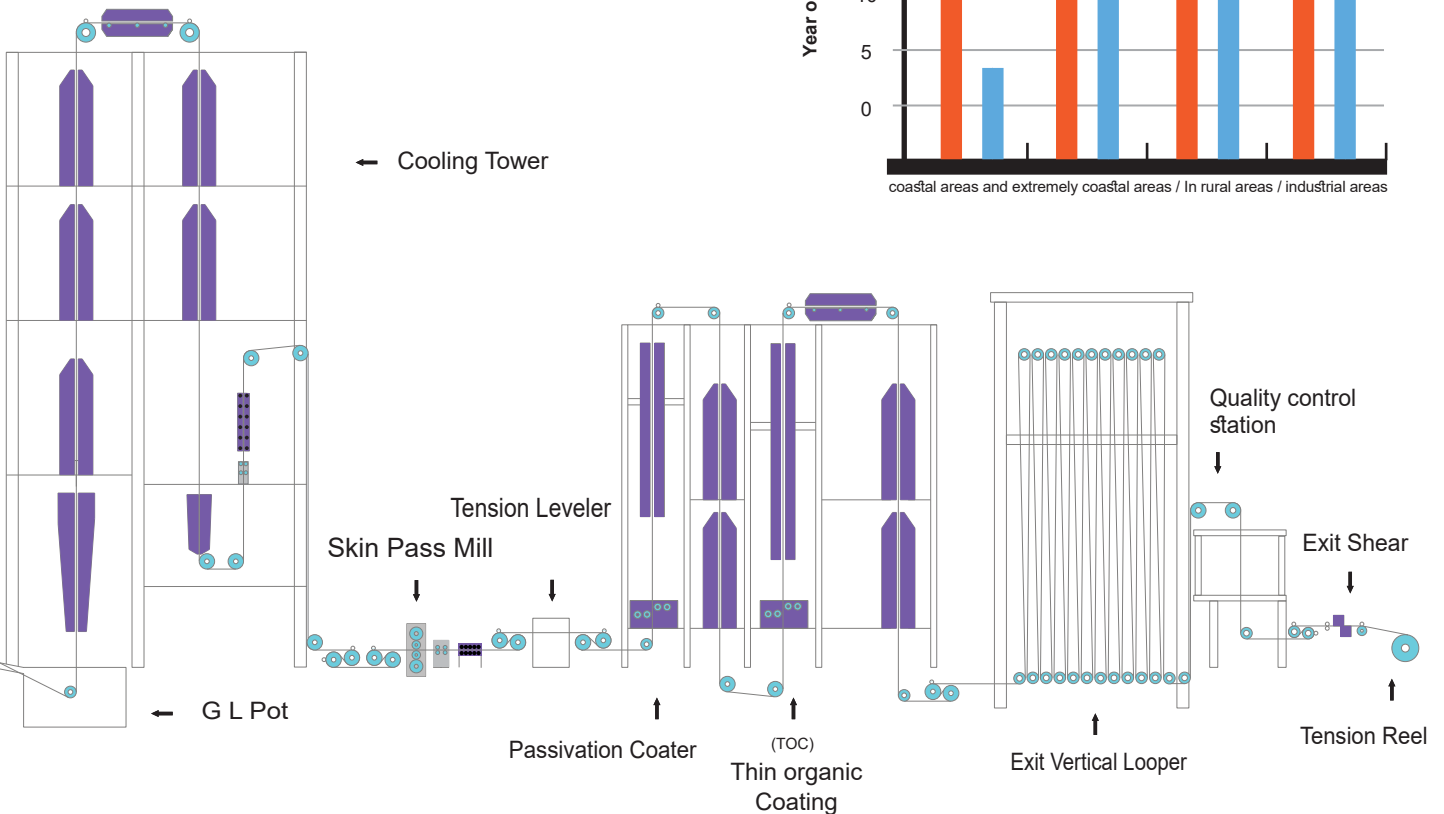
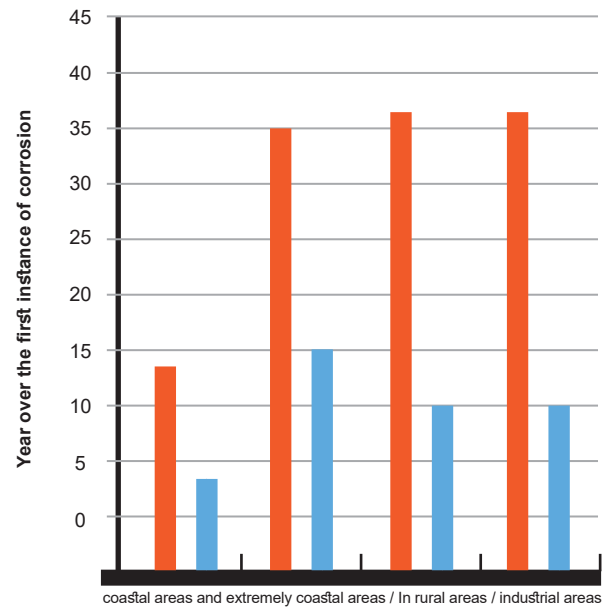
Galvalume's key features such as strong corrosion resistance, excellent surface quality and high forming flexibility highlights its suitability for usage in the following industries:

Car manufacturing industry	Manufacturing car exhaust pipes, car spare parts, traffic signs, Guardrail, etc.
Construction work	Different type of building ceiling and façade, light panels and Pre-constructed walls, panel sandwich and LSF
Installations	Cable tray, reserves, different oxygen makers, air conditioning Devices and water heaters
Electronic and computer Industries	Kitchen cabinets, refrigerator frames, different shelves, air Conditioning devices and water heaters
Home appliances	Power boards and transformers, etc.
Pipe and profile industries	Different pipes with and without splits and installation pipes
Agricultural industry	Agricultural tools and devices
Making barrels and tanks	Different tanks of chemicals, reserve tanks, etc.
Cement industry	Different machinery in cement industry



Comparative Chart of Coating life of Galvalume and Galvanised Sheets

- Galvalume AZ50/AZM150
- Galvanized G90/Z275



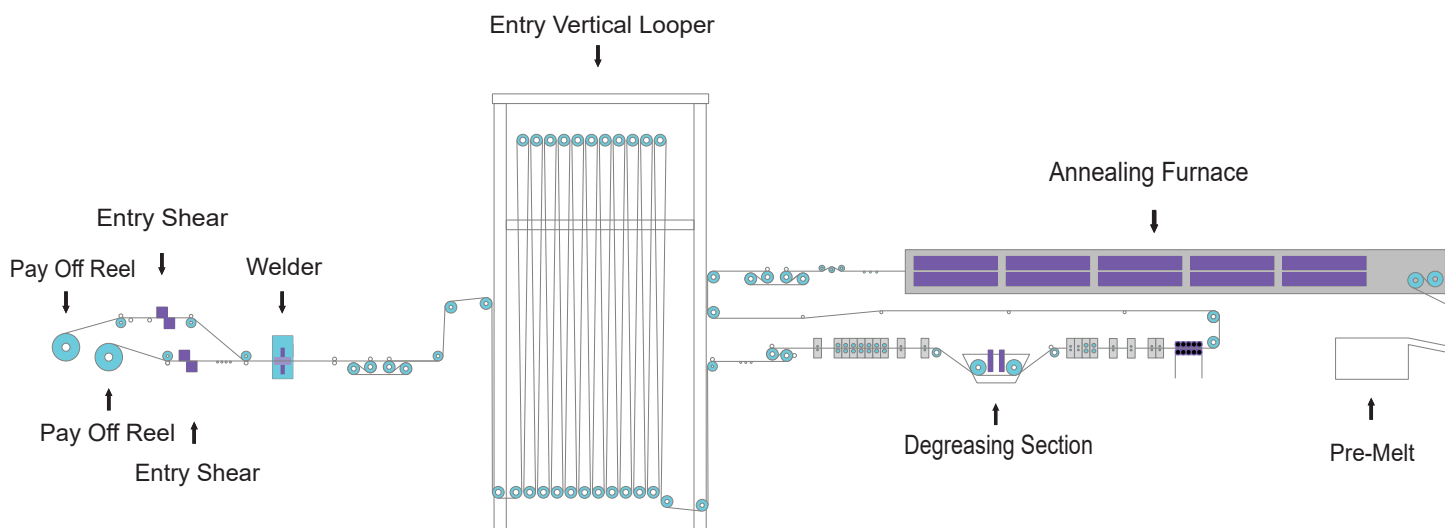


Quality Control

All products will go through different stages of Quality Control during and after the following production process. Samples are taken in the meanwhile and taken to the laboratories for mechanical specification test, metallography, salt spray test, coating weight analysis and coating tenacity according to the national and international standards.

The company laboratory is qualified and approved by Iran National Standards Association to provide laboratory services for all types of cold rolled and processed products throughout the country. All carried tests will receive valid authorized certification as per ISO17025 Standard.

General Layout of Galvalume Process



Galvalume Steel





Certificates and Achievements



ISO 9001:2008



ISO 14001:2004



ISO 18001:2007



Certificate of Standard Laboratory



Exemplary exporter of Qazvin province 2007



Exemplary exporter of Qazvin province 2008



Exemplary exporter 2009



Exemplary exporter 2010



Superior young industrial company 2007



National Standard of Galvalume Sheet



National Standard of Galvanized Sheet



National Standard of Cold Rolled Coil and Sheet

Packing packing

