



VERTEX CO. LTD
INFRASTRUCTURE PROTECTION



HIGH PERFORMANCE
CORROSION
PROTECTION

CASE-001

PROJECT CASE STUDIES

BLUE SEAL PROTECTIVE COATING SYSTEM

Proven Performance.
Real World Results.



MARINE & OFFSHORE

OIL & GAS

WATER & WASTEWATER

INFRASTRUCTURE

ENERGY

INDUSTRIAL FACILITIES



THIRD-PARTY
TESTED



PROVEN IN
EXTREME ENVIRONMENTS



LONG-TERM
PROTECTION



HIGH-BUILD
SYSTEMS



LOW MAINTENANCE
SOLUTION



GLOBAL
APPLICATIONS

VERTEX Co. Ltd
Infrastructure Protection



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PROTECTING ASSETS.
EXTENDING LIFE.
ENGINEERED TO PERFORM.



MARINE & OFFSHORE PROJECT CASE STUDY

Protecting Marine Assets in
Extreme Environments

PROJECT OVERVIEW

- Project Category : Marine & Offshore
- Asset Type : Commercial Vessel
- Application Area : Hull, Underwater Area, Deck, Structures
- Coating System : Blue Seal Protective Coating System
- Environment : Saltwater / Marine Atmosphere / UV
- Objective : Long-Term Corrosion Protection & Durability

SOLUTION WORKFLOW

- 1 Surface Preparation**
Sand Blasting to Sa 2.5
- 2 Blue Seal Base Coat**
High Build Epoxy
- 3 Blue Seal Top Coat**
High Performance Finish
- 4 Inspection & Testing**
Quality Assurance
- 5 Completed System**
Long-Term Protection



- High Performance Protection
- Tough Marine Environments
- Proven Real World Results

APPLICATION PROCESS

- ✓ Surface Preparation
- ✓ Blue Seal Base Coat
- ✓ Blue Seal Top Coat
- ✓ Quality Inspection



BEFORE



AFTER



Hull Coating



Deck & Structures



Spray Application



Work Completed



Corrosion
Protection



Extended
Service Life



Reduced
Maintenance



Proven
Performance





MARINE & OFFSHORE PROJECT CASE STUDY

PROJECT OVERVIEW



PROJECT CATEGORY
Marine & Offshore



ASSET TYPE
Commercial Vessel



PROTECTION SYSTEM
Blue Seal Protective
Coating System

COATING APPLICATION PROCESS

1



SURFACE PREPARATION
Abrasive blast cleaning to
Sa 2½ standard

2



BLUE SEAL BASE COAT
High build epoxy coating
for superior corrosion
protection

3



BLUE SEAL TOP COAT
High performance finish coat
for long term durability and
chemical resistance

4



INSPECTION
DFT measurement and visual
inspection of coating system

5



COMPLETED SYSTEM
Robust protection for harsh
marine environments



APPLICATION IN PROGRESS



AIRLESS SPRAY APPLICATION



BEFORE



AFTER



PROJECT COMPLETED

High performance protection
for extended service life



CORROSION PROTECTION

Excellent barrier against
saltwater and chemicals



MARINE ENVIRONMENT

Engineered for harsh
marine conditions



ABRASION RESISTANCE

High mechanical strength
and impact resistance



LONG SERVICE LIFE

Designed for long term
durability and reliability



THIRD-PARTY TESTED

Independently tested to
ASTM & IMO standards



INFRASTRUCTURE PROTECTION SOLUTIONS

ENGINEERED COATING SYSTEMS FOR CRITICAL INFRASTRUCTURE ASSETS

Blue Seal Protective Coating System provides advanced corrosion protection for infrastructure exposed to the most demanding environments. Our high performance coatings help extend asset life, reduce maintenance and ensure operational reliability.



EXTREME CORROSION PROTECTION

Superior barrier against salt spray, chemicals, UV, moisture and abrasion.



EXTENDED SERVICE LIFE

Significantly reduces repainting frequency and extends asset lifetime.



LOWER TOTAL COST

Reduce downtime, maintenance and replacement cost over the asset life cycle.



PROVEN PERFORMANCE

Tested to ASTM, ISO, NACE and other international standards.

COATING SYSTEM AT A GLANCE



- 1 SURFACE PREPARATION**
Abrasive blast cleaning to Sa 2½ standard for optimal adhesion.
- 2 BLUE SEAL BASE COAT**
High build epoxy for superior corrosion protection.
- 3 BLUE SEAL TOP COAT**
High performance finish coat for UV & chemical resistance.
- 4 QUALITY INSPECTION**
DFT measurement & holiday detection for quality assurance.



1 STORAGE TANKS

Internal and external protection for crude oil, refined products, chemical and water storage tanks.



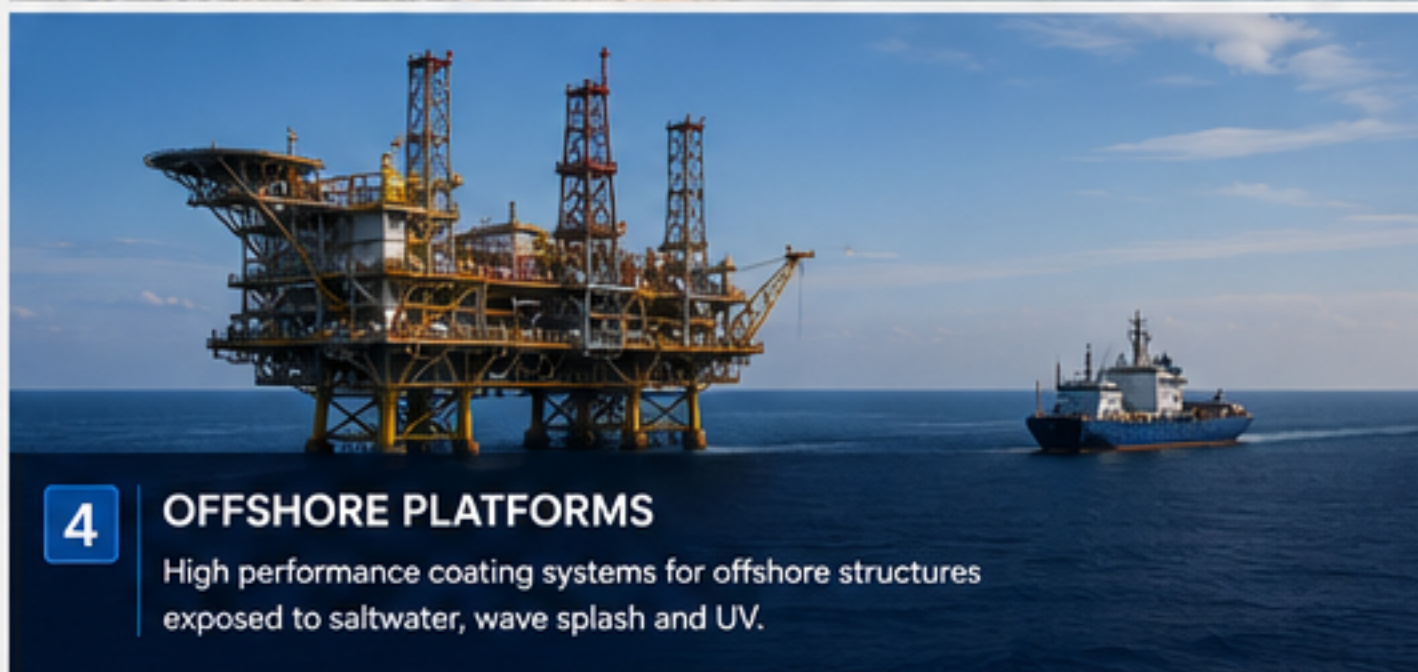
2 PIPELINES

Reliable corrosion protection for above-ground and buried oil, gas, water and chemical pipelines.



3 PORT & HARBOR FACILITIES

Protects steel structures, piles, jetties, cargo handling equipment and marine infrastructure in aggressive marine environments.



4 OFFSHORE PLATFORMS

High performance coating systems for offshore structures exposed to saltwater, wave splash and UV.



5 CONCRETE INFRASTRUCTURE

Moisture barrier and chemical resistant coatings for bridges, dams, spillways and other concrete assets.



CORROSION PROTECTION

Resists corrosion from saltwater, chemicals, UV and harsh weather.



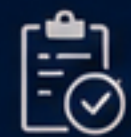
LONG-TERM DURABILITY

Engineered systems for maximum adhesion and long lasting performance.



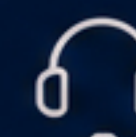
COST EFFECTIVE

Lower maintenance costs and reduced downtime.



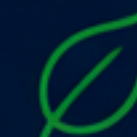
THIRD-PARTY TESTED

Tested to ASTM, ISO, NACE and other global standards.



TECHNICAL SUPPORT

Professional coating consultation and on-site application support.



ENVIRONMENTALLY RESPONSIBLE

Low VOC, compliant with environmental regulations and sustainable solutions.



INDUSTRIAL EQUIPMENT RESTORATION

EXTEND SERVICE LIFE. RESTORE PERFORMANCE.

Blue Seal Protective Coating System is applied to damaged and corroded industrial equipment to restore like-new condition and provide long-term protection against corrosion, chemical attack and abrasion in the most demanding environments.

APPLICATIONS



PUMPS & PUMP CASINGS

Protection against corrosion and cavitation in wet process service



IMPELLERS & ROTATING PARTS

Restores worn surfaces and improves efficiency and reliability.



VALVES & PIPE FITTINGS

Resists chemical attack and extends maintenance intervals.



FLANGES & CONNECTORS

Seals and protects flange faces from corrosion under harsh conditions



HEAT EXCHANGERS & SHELLS

Protects internal and external surfaces for extended service life.

COATING SYSTEM

1

SURFACE PREPARATION

Abrasive blast cleaning to Sa 2½ standard

2

BLUE SEAL BASE COAT

High build epoxy for superior adhesion

3

BLUE SEAL TOP COAT

High performance finish coat for chemical resistance and durability

4

QUALITY INSPECTION

DFT measurement & holiday detection to ensure coating integrity

REAL PROJECT PHOTOS – BEFORE & AFTER

BEFORE



AFTER



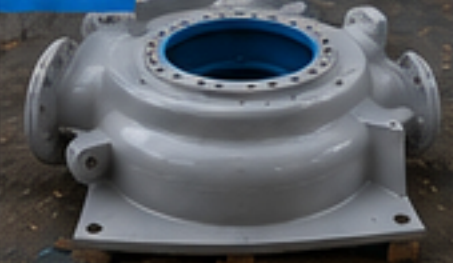
IMPELLER RESTORATION

Severe erosion and corrosion restored to like-new condition.

BEFORE



AFTER



PUMP CASING RESTORATION

Damaged casing repaired and coated for long-term protection.

BEFORE



AFTER



FLANGE COVER PLATE

Corroded surface protected with high performance coating.

BEFORE



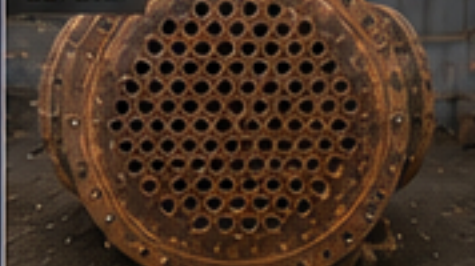
AFTER



VALVE BODY RESTORATION

Corroded and pitted valve body restored for reliable service.

BEFORE



AFTER



HEAT EXCHANGER RESTORATION

Corroded tubesheet cleaned and protected for extended service life.

BEFORE



AFTER



IMPELLER / ROTATING PART RESTORATION

Severely damaged impeller restored to optimal performance.



CORROSION PROTECTION

Excellent barrier against chemicals, salts and moisture.



EXTENDED SERVICE LIFE

Restores equipment and significantly reduces maintenance and downtime.



IMPROVED PERFORMANCE

Restores efficiency, reliability and operational safety.



COST EFFECTIVE

Repair and coating solution is more economical than replacement.



THIRD-PARTY TESTED

Tested to ASTM, ISO, NACE standards for quality and performance.





INDUSTRIAL EQUIPMENT RESTORATION

EXTEND SERVICE LIFE.
RESTORE PERFORMANCE.

Blue Seal Protective Coating System is applied to critical industrial equipment to provide long-term corrosion protection, chemical resistance and abrasion resistance in the most demanding environments.

APPLICATIONS



PUMPS & PUMP CASINGS

Protection against corrosion and cavitation in demanding service.



IMPELLERS & ROTATING PARTS

Restores worn surfaces and improves efficiency.



VALVES & PIPE FITTINGS

Resists chemical attack and extends maintenance intervals.



FLANGES & CONNECTORS

Seals and protects flange faces from corrosion under harsh conditions.



HEAT EXCHANGERS & SHELLS

Internal and external protection for extended equipment life.

COATING SYSTEM

1

SURFACE PREPARATION

Abrasive blast cleaning to Sa 2½ standard

2

BLUE SEAL BASE COAT

High build epoxy for corrosion barrier

3

BLUE SEAL TOP COAT

High performance finish coat

4

QUALITY INSPECTION

DFT measurement & holiday detection

EQUIPMENT RENEWED. ASSETS PROTECTED.

IMPELLER

BEFORE



AFTER



IMPELLER – ROTATING PART

BEFORE



AFTER



PUMP CASING

BEFORE



AFTER



VALVE BODY

BEFORE



AFTER

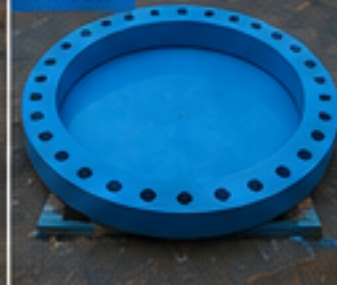


FLANGE COVER PLATE

BEFORE



AFTER



PIPE FLANGE

BEFORE



AFTER



PUMP CASING (LARGE)

BEFORE



HEAT EXCHANGER

BEFORE



AFTER



OUR PROVEN RESTORATION PROCESS



1 ABRASIVE BLAST CLEANING



2 BASE COAT APPLICATION



3 TOP COAT APPLICATION



4 DFT & HOLIDAY INSPECTION



5 COMPLETED SYSTEM



SUPERIOR CORROSION PROTECTION

Excellent barrier against chemicals, salts and moisture.



EXTENDED SERVICE LIFE

Reduces maintenance and downtime, extends equipment life.



HIGH PERFORMANCE

Restores efficiency and reliability to like-new condition.



COST EFFECTIVE

Repair and coating solution is more economical.



THIRD-PARTY TESTED

Tested to ASTM, ISO, NACE standards for quality and performance.



INDUSTRIAL FACILITIES PROTECTION SOLUTIONS

EXTEND SERVICE LIFE. REDUCE COSTS.
MAXIMIZE ASSET VALUE.

Blue Seal Protective Coating System delivers long-term corrosion protection to storage tanks, containment areas, pipelines and wastewater treatment facilities in the harshest environments.

APPLICATIONS



STORAGE TANKS

Crude oil, refined products, chemicals, water and fire water tanks



SECONDARY CONTAINMENT

Concrete containment walls and floors exposed to chemical spills and moisture



PIPELINES & STRUCTURES

Buried and above-ground pipelines, supports, skids and steel structures



WASTEWATER TREATMENT PLANTS

Tanks, basins, clarifiers and channels exposed to corrosive environments

COATING SYSTEM

1

SURFACE PREPARATION

Abrasive blast cleaning to Sa 2½ standard to ensure optimal adhesion

2

BLUE SEAL BASE COAT

High build epoxy for superior corrosion protection and barrier performance

3

BLUE SEAL TOP COAT

High performance finish coat for UV resistance and extended durability

4

QUALITY INSPECTION

DFT measurement, holiday detection and final visual inspection

STORAGE TANKS – BEFORE & AFTER

BEFORE



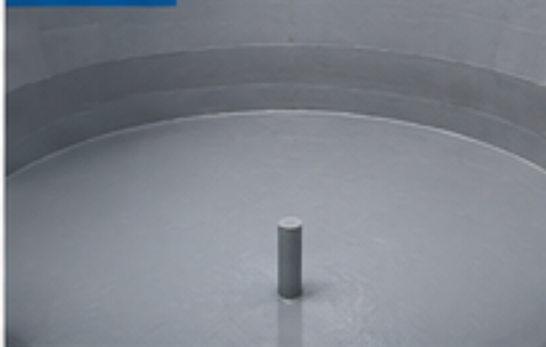
AFTER



BEFORE



AFTER



BEFORE



AFTER



Long-Term
Corrosion
Protection



Lower Maintenance
& Recoating
Frequency



Extended Asset
Service Life



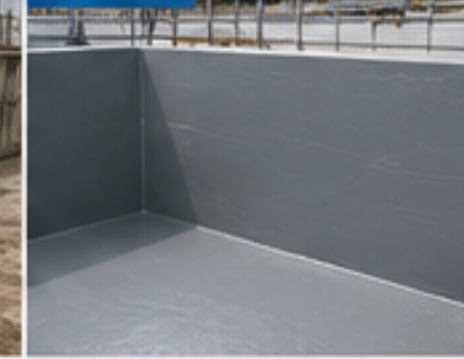
Reduced Lifecycle
Cost

SECONDARY CONTAINMENT

BEFORE



AFTER



PROTECTED AGAINST

- ✓ Chemical Spills & Leaks
- ✓ Moisture Ingress
- ✓ Abrasion & Wear
- ✓ Cracking & Degradation
- ✓ Freeze-Thaw Damage
- ✓ Harsh Weather Conditions

PIPELINES & STRUCTURES

BEFORE



AFTER



WASTEWATER TREATMENT PLANT

BEFORE



AFTER



BEFORE



AFTER



KEY BENEFITS

- ✓ Superior Chemical Resistance
- ✓ Easy to Clean Smooth Surface
- ✓ Resists Biological Attack & Corrosion
- ✓ Improves Operational Efficiency

TYPICAL PROJECT EXAMPLES



STORAGE TANK
External & Internal
Coating System for
Crude Oil Tank



SECONDARY CONTAINMENT
Epoxy Coating for
Concrete Bund Wall



PIPELINE
External Pipeline
Coating for Corrosion
Protection



STEEL STRUCTURE
Protective Coating for
Steel Support
& Skid System



WASTEWATER PLANT
Coating System for
Tanks, Basins &
Treatment Channels



PROVEN PERFORMANCE
Field proven in marine,
industrial and municipal
projects worldwide.



EXTENDED SERVICE LIFE
Protects assets for years
and reduces total cost
of ownership.



THIRD-PARTY TESTED
Tested to ASTM, ISO, NACE
standards for quality
assurance.



ENVIRONMENTALLY RESPONSIBLE
Low VOC, compliant with
environmental regulations.



GLOBAL SOLUTIONS
Engineered coating solutions
for the most demanding
environments.



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PROTECTING ASSETS.
EXTENDING LIFE. ENGINEERED TO PERFORM.

PROVEN SOLUTIONS. LASTING PROTECTION.

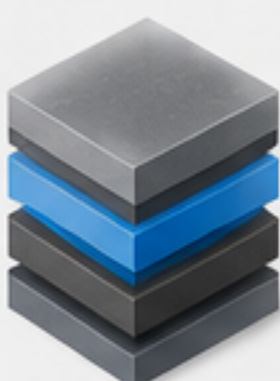
EXTEND SERVICE LIFE. MAXIMIZE PERFORMANCE.

From industrial equipment to large-scale facilities, Blue Seal Protective Coating System delivers superior corrosion protection, reduces maintenance costs and extends the service life of critical assets in the most demanding environments.

WHY BLUE SEAL SYSTEM

-  **SUPERIOR CORROSION PROTECTION**
Excellent barrier against chemicals, moisture, salts and harsh environments.
-  **EXTENDED ASSET LIFE**
Significantly reduces corrosion rate and extends maintenance intervals.
-  **COST SAVING SOLUTION**
Lower lifecycle cost through reduced repair, downtime and replacement.
-  **HIGH PERFORMANCE COATING**
Advanced epoxy technology for excellent adhesion and durability.
-  **THIRD-PARTY TESTED**
Independently tested to ASTM, ISO, NACE and other international standards.

COATING SYSTEM AT A GLANCE

- 
- 1 SURFACE PREPARATION**
Abrasive blast cleaning to Sa 2½ standard
 - 2 BLUE SEAL BASE COAT**
High build epoxy for superior corrosion protection
 - 3 BLUE SEAL TOP COAT**
UV & chemical resistant high performance finish
 - 4 QUALITY INSPECTION**
DFT measurement & holiday detection for quality assurance

PROJECT GALLERY – REAL RESULTS

STORAGE TANK – EXTERIOR

BEFORE



AFTER

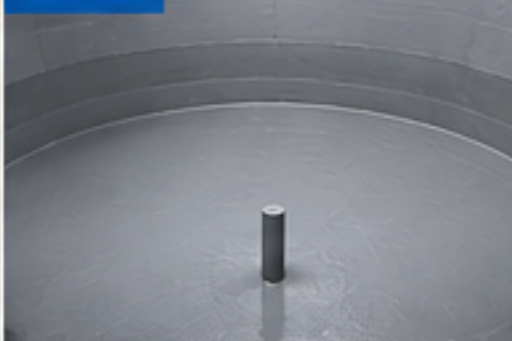


STORAGE TANK – INTERIOR

BEFORE



AFTER

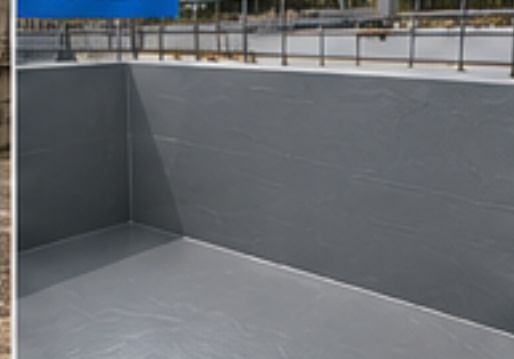


SECONDARY CONTAINMENT

BEFORE



AFTER



PIPELINES & STRUCTURES

BEFORE



AFTER



WASTEWATER TREATMENT PLANT

BEFORE



AFTER



VALVE & PIPE FITTINGS

BEFORE



AFTER



SPECIAL FEATURE – IMPELLER RESTORATION

SEVERELY DAMAGED



RESULT

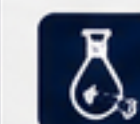
- ✓ Restored to like-new condition
- ✓ Excellent abrasion resistance
- ✓ Balanced performance
- ✓ Extended equipment life

PERFORMANCE SUMMARY



PROTECTION LIFE
Proven long-term corrosion protection in harsh environments

10+ YEARS



CORROSION REDUCTION
Significantly reduces corrosion rate compared to uncoated steel

Up to **90%**



MAINTENANCE INTERVAL
Extends repainting cycles and reduces downtime

Up to **3X**



COST SAVINGS
Lower lifecycle cost through reduced maintenance and repair

Up to **30%**

TEST RESULTS (TYPICAL)

TEST ITEM	STANDARD	RESULT
Salt Spray (1000h)	ASTM B117	Pass
Adhesion (Pull-off)	ASTM D4541	> 10 MPa
Impact Resistance	ASTM D2794	> 15 J
Abrasion Resistance	ASTM D4060	< 50 mg / 1000 cycles
Chemical Resistance	ASTM D543	Excellent
Temperature Resistance	—	-40°C to 120°C

TRUSTED BY INDUSTRIES



OIL & GAS



PETROCHEMICAL



WASTEWATER



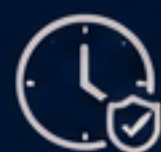
MARINE & OFFSHORE



POWER PLANTS



INFRASTRUCTURE



EXTENDED SERVICE LIFE
Protecting assets for years to come.



MAXIMIZED RELIABILITY
Improves operational reliability and safety.



MINIMIZED DOWNTIME
Faster coating application, quick return to service.



ENVIRONMENTAL COMPLIANCE
Low VOC, sustainable solution for a better future.



ENGINEERED TO PERFORM
Advanced coating technology you can trust.



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