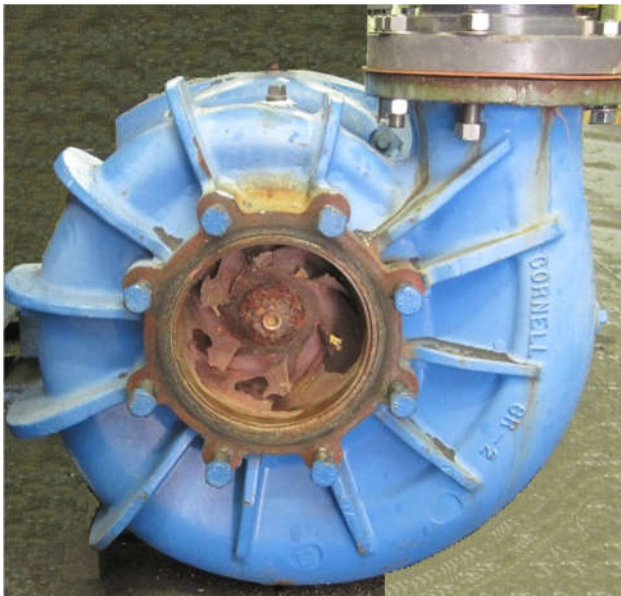


Why are **SIMSITE®** Pumps, Impellers & Rings, and Pump Products Superior to ALL Metallics?



The use of metallic pumps and pump parts for any seawater, wastewater, or corrosive service has become obsolete! Today, there are much better technologies and solutions available for Customers such as **SIMSITE®** Pumps, Impellers, Sleeves, Guide Bearings, Mechanical Seals, and Pump Upgrades, which not only NEVER CORRODE, eliminate

ELECTROLYSIS, are lightweight, perfectly balanced (and remain perfectly balanced), but are energy efficient and eliminate maintenance and operating expenses and **NEVER** suffer from Performance Deterioration!

All Owners and CEOs would like to see better returns for their companies. The installation of **SIMSITE®** upgrades is absolutely necessary to contribute to that goal. The elimination of unnecessary maintenance expenses, downtime, and operating expenses combined with energy savings will greatly contribute to your bottom line!



SIMSITE® IMPELLER & CASING RINGS
-- NEVER CORRODES In SEAWATER,
Wastewater, Sewage, Chlorine, Bromine,
Brine, and is excellent with many
Chemicals!

All Centrifugal Pumps operating in a corrosive environment such as seawater, sewage, or wastewater should be upgraded with **SIMSITE®** Impellers, Casing Rings, and Guide Bearings to become Energy Efficient and Maintenance Free!



What does SIMS PUMP Manufacture?

SIMS PUMP manufactures structural composite engineered Pumps and engineered Pump Parts (Upgrades) for All centrifugal pumps (Impellers, Wear Rings, Casing Rings, Sleeve Bearings, Guide Bearings, Mechanical Seals, Backplates, Pump Casings, Propellers, etc.), which NEVER CORRODE, or support Electrolysis in seawater! Our Pumps and Pump Part Upgrades are manufactured (machined) from solid blocks of our patented structural composite SIMSITE® Our Simsite® Products are LIGHTWEIGHT, (6 times lighter than bronze or stainless steel), ENERGY EFFICIENT, perfectly BALANCED both Mechanically and Hydraulically, and they remain balanced for the life of the pump.

How does the Customer save Money?

It is not just that SIMSITE® Products are much more efficient and do not corrode, it is also that Repair & Maintenance Expenses are eliminated when a program is initiated to upgrade impellers and casing rings to SIMSITE®! Furthermore, the life of your metallic pump casing is extended by many years, because SIMSITE® Impellers & Rings are Inert and Electrolysis and "Pump Wash-Out" (Wear under the Casing Rings) are Eliminated! A program to upgrade existing pumps with Simsite® Impellers & Casing Rings will save the Customer millions dollars per year by extending the life of the pump casing and rotating element as well as eliminating most of the repair and maintenance expenses as well as the money that is being saved because our SIMSITE Impellers & Casing Rings are much more efficient!

How are SIMSITE® Products Different from Other Composite Products?

1.) Simsite® Impellers & Casing Rings do NOT CORRODE in seawater, sewage, chlorine, bromine, or wastewater, and they are 100% machined from solid blocks of Simsite® Patented Structural Composite, so Simsite® Impellers NEVER go into an imbalance. Simsite® Impellers are balanced both mechanically and hydraulically and remain balanced for the life of the pump! That means you have less radial and axial movement in the pump, which translates into longer life for:

- a.) Bearings
- b.) Mechanical Seals
- c.) Rings & Sleeves

All Simsite® Products are machined from solid blocks of our patented structural composite – they are NOT CAST, or Molded.

2.) Simsite® Impellers & Casing Rings are INERT. They do NOT support ELECTROLYSIS, which means that the pump casings last much longer when they have Simsite Impellers & Casing Rings.

Simsite® Products NEVER CORRODE in seawater, wastewater, sewage, chlorine, and are excellent with many chemicals!

3.) Simsite® Casing Rings act like a gasket and seal against the ring landing areas PREVENTING “PUMP WASH-OUT,” a very costly expense to repair.

Corrosion, Erosion, Cavitation, Electrolysis, Pump Wash Out and Radial Reaction Problems are all eliminated when Customer's upgrade to Simsite® Pumps and Pump Parts!



OLD TECHNOLOGY
Bronze/Stainless

4.) The life cycle of a Simsite® Impeller/Pump is many times that of any metallic impeller/Pump. On an average, our Customers report a life span increase 7 to 10 times that of metallic impellers and rings!



NEW TECHNOLOGY
SIMSITE® Structural Composite

Simsite® Impellers and Pumps are designed, engineered and machined so that the impeller vane geometry and the casing volute geometry enables the Customer's Operating Point to be the Best Efficiency Point (BEP), which maximizes efficiency and minimizes radial loading.

5.) Upgrading to Simsite® Impellers & Casing Rings for every seawater and wastewater pump will save millions of dollars per year in repair and maintenance expenses!

SIMSITE® Impellers will improve Efficiency of your Existing Pump

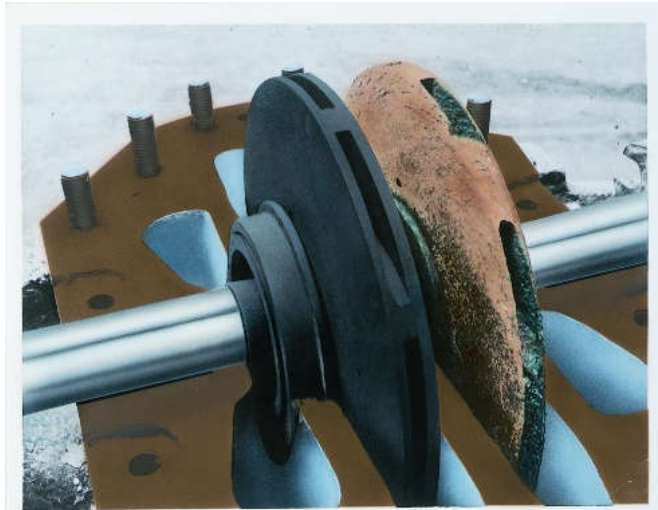
The Impeller is the heart of any Centrifugal Pump. As a human heart, a pump impeller is the most loaded pump part, constantly stressed by hydrodynamic forces, fatigue, corrosion, abrasion, chemical attack and cavitation.



The overall Efficiency of a Centrifugal Pump is in direct correlation to the Efficiency of the Impeller. Also, the Impeller’s match to the pump Casing and to Operating Conditions of the Pump are critical for maximizing efficiency.

| Advantage of SIMSITE Impeller | Cause of Advantage | Most pronounced effect |
|--------------------------------------|--|---|
| No corrosion | SIMSITE® Impellers machined from SIMSITE® Structural Composite, which NEVER corrodes in salt water | Salt Water, Brine, Sewage, Reverse Osmosis and other corrosive applications. |
| Less Frictional Losses | SIMSITE® Impellers have machined vane surfaces, have much smoother surface finish. | Low Specific Speed Impellers |
| Less Volumetric Losses | SIMSITE® Impellers run on Smaller Ring Clearances | Mixed Flow Impellers |
| Less Mechanical Losses | SIMSITE® Impellers 6 times lighter | All Pumps |
| Less Vibration | SIMSITE® Impellers are perfectly balanced both mechanically and hydraulically | All Pumps |
| No Efficiency degradation | SIMSITE® Impellers will not corrode or erode; therefore, there is no reduction in Efficiency and Performance. | Sea Water, Waste Water, Sewage, Chemical Applications |
| No Electrolysis | SIMSITE® Impellers are Inert and will not support or conduct electrolysis. Therefore, galvanic corrosion is eliminated. | Sea Water, Waste Water, Sewage, Chemical Applications |
| Higher Efficiency | Depends upon Pump Existing Conditions and Operating Conditions. | Average 5% -12% |

SIMS Pump Company is a leader in design and manufacturing of Premium Efficiency SIMSITE® Structural Composite Pumps, Impellers & Casing Rings and many other Pump Parts. Any Centrifugal Pump fit with the Premium Efficiency SIMSITE® Structural Composite Impeller & Casing rings will save a significant amount of money for the pump Owner and Operator. This saving comes from Electrical Saving, (a higher efficiency pump consumes less energy), and from Saving on Maintenance and Repair (the pump fitted with a SIMSITE® Impeller will have a longer and smoother run time), because the SIMSITE® Structural Composite Impellers will not corrode in seawater, wastewater, sewage, chlorinated water and is good with many chemicals.



Both Impellers Operated in Seawater for 18 months. The Simsite® Impeller is like new, while the metallic impeller is completely destroyed!



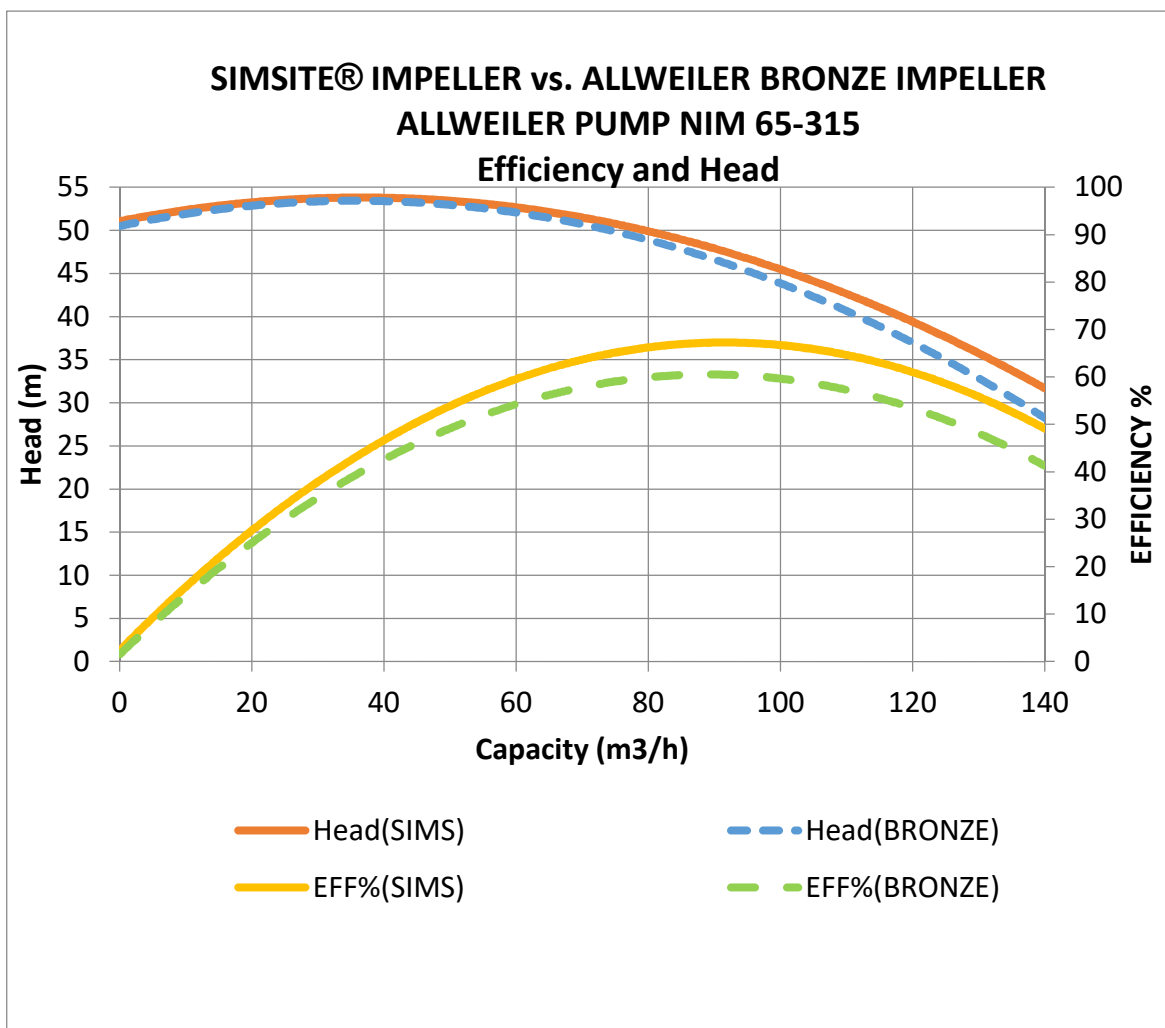
**SIMSITE® Impeller and Ring
Model 8 x 6 VLM after 10 Years of Continuous S.W. Service**



**SIMSITE® 36 Hi Flo Impeller,
After 18 years of Continuous S.W. Service.**



Below is an example of the Efficiency Gain for Allweiler NIM 65-315 Pump with a SIMSITE® Impeller. The metal pump was fitted with SIMSITE® Impeller and tested by Allweiler Ag. Company. The test results show that the pump with a Premium Efficiency SIMSITE® Structural Composite Impeller outperformed the same pump with metallic Impeller by 5%.



The Pump Efficiency with Simsite® Impeller is 66%

The Pump Efficiency with Metallic Impeller is 61%

Since the tested pump consumes 20 kW, the Electrical Saving is 1kWh/hr



Just Some Testimonials from Customers.....



Clark Dodge
Owner/President of CED Consulting LLC
Koloa, Hawaii

Senior Staff Chief Engineer
[Washington State Department of Transportation, Ferries](#)

Clark Dodge

- ***“Aloha from Hawaii. John, I have used Simsite® Impellers and Wear rings for around 40 years with fantastic results. We used to go through these parts around 3 to 5 years depending weather continuous, or interment duty. The Simsite® units last about 18 to 20 years. George always took great care of me and the State of Washington. Many people over here have never heard of Simsite® and the fact they are going to chilled sea water makes your equipment’s and Pumps and Valves the pure choice.”***
 - ***“SIMS makes the best sea water and brine pumps in the World. I had some sea water cooling pumps that outlasted the pump seals several times over.”***
-



Drew Arrington
Port Engineer
[T-Solutions, Inc.](#)
Jackson, Mississippi Area
Drew Arrington

“I am familiar with Simsite® products and have used them multiple times over the years while shipping out; aside from corrosion resistance and the like, they also offer great weight savings thus increasing motor and bearing life.”



Harry VORDOKAS
SIGNAL MARINE
Engineering
Consultants LLC
Miami, Florida



RCCL – Royal Caribbean Cruise Lines

Manager Technical Services -- Managing the resort of in-house Repairs and Maintenance and Engineering Support

“First time I used SIMSITE® was back in 1986 on SW pumps on old cruise ships, steamers! Initially with some reservation, since this was a new material and SW systems on these ships was extremely crucial. We have ended up equipping the whole fleet with SIMSITE Impellers, Casing Rings, you name it, and we got a major headache off the table. Since then SIMS developed Pumps completely of carbon graphite! The technology has proven very reliable, received required Class Certification! I use and recommend the SIMS Pumps without hesitation.... Any question regarding the benefits on maintenance jobs and budget are big! Any doubts, just ask me!”

“SIMSITE® is an excellent material and product, proven and proven again. And, yes, Purchasing Managers are not educated and driven for such technology.”



Archie Smiley
Fleet Director
Bernhard Schulte (UK)
Newcastle upon Tyne, United Kingdom



“I had SIMSITE® Impellers and wear rings on ship pumps in the late 70's and have been a fan ever since. They do internals for so many other manufacturers' pumps nowadays, but it is really challenging to persuade Owners to adopt them even though they are superior.”



Paul Morgan
Owner/President
CED Consulting LLC

Energy and Fuel
Efficiency Manager
P & O Ferries

Fleet Technical Manager
VShips



"I don't understand why all new vessels aren't fitted with SIMS PUMPS from the beginning. Save a lot of money in the long run, as well as re-fits and replacements. I also like the idea that if you have variable speed pumps, you can fit specifically designed and engineered impellers and wear rings into existing pump casings that will be to match the temperature operating range of the vessels trading pattern. More savings in the long run!"



John Sfakis
Scientist, Engineer
Mount Sinai, New York

"The best in advanced manufacturing methods and use of composite technologies. Unlimited possibilities in high reliable, longevity pumps and subassembly components."



John Cullan
Chief Engineer
Norwegian
Cruise Line
Jacksonville, Florida Area



Hi John,
"Good afternoon! We already have SIMS impellers and a SIMS pump in use on board. They're fantastic! Thank you and we intend to continue purchasing your products."
Best regards, -John



Ltd. (ENERIN Joint Ltd.)
Belarus



Mikhail
Gaibov
1st
Director
of
Energy
Joint

"One of the main parameters in centrifugal pumps is the cost of energy consumed. They can reach 90% of the LCC. In this case, these costs will be significantly lower due to the lighter impeller made of composite materials instead of steel. The efficiency will be higher, as there will be no deposits and corrosion products in the wet part due to the smooth non-metallic surfaces. Service life of the pumps will be longer. Such pump is a dream of every pump engineer and owner of pumping system!"

STEVE CINKOSKY
ARMY CORPS OF ENGINEERS

"The below was part: of the justification for our use of the Simsite impellers for the Dredge Esaayons main salt water circulation pumps on the central cooling system:

The light weight reduces vibration levels and increases the life of the shaft, bearings, seals, and the motor. The material resists corrosion and cavitation damage better than the other materials. The pumping efficiency is increased by 2 to 6%. Each Simsite® impeller and casing ring set for this pump saves us:


\$3312.00 electrical energy

\$7500.00 replacement impeller costs (bronze more if stainless steel)

\$1680.00 labor to change impellers

\$ 800.00 est. other misc. savings, from reduced maintenance

\$13292.00 total over using standard impellers.”



“I was 1st engineer aboard CS Responder and was able to convince port engineer Pat McCabe that Simsite was the answer to our centrifugal pump problems! (This knowledge was based on my experience as a 3 A/E - working for 1 A/E William G. Maus - with putting a Simsite replacement impeller and wear rings upgrades in an evaporator brine pump aboard SS Constitution in Hawaii.”

**Timothy Palange
Tim.Palange.ctr@MSC.NAVY.MIL
Chief Engineer
USNS Mendonca (T-AKR 303)**

“I used these impellers and rings for about 20 years in my previous company and found them to be very good. They have good erosion resistance in addition to corrosion resistance. They are also very light compared to stainless steel, or bronze impellers, which reduces the electrical load on the motors.”

**Vladimir Gadalkin
Engineer Superintendent
Unicorn Management Services Ltd**

“The Simsite® composite impeller was in service for approximately 13 years and exhibits virtual no signs of wear! The impellers are lighter in weight and exhibit lower coefficient of friction than their metallic counter parts.”

**Ted S. FASCA
Manager
Potomac Electric Power Company**

“The experiences which we have gained up till now let us believe that your composite SIMSITE® SMS 300 is an excellent substitute for bronze, stainless steel and silicon carbide.”

**Agri Brunsbiittel
Technical Department
Hamburger-Technik-Handel GmbH**

“The impeller we purchased from SIMS 5 years ago is as good as the day it was installed, and better than the original cast impeller, well worth the investment!”

**David O'Donnel, CPO,AFO
Operations Manager
Hatfield Township
Hatfield Aquatic Center**

“Tetrad Services Inc. was contracted to inspect and overhaul a 15 MW General Electric Co. turbine generator. During the inventory of the equipment, it was discovered the AC control/lube oil and the DC bearing oil pumps were missing. The original pump manufacturer stated the pumps were obsolete with no records for manufacturing. Sims Pump Company designed and manufactured the following SIMSITE Structural Composite Material pumps:

*One 30 horse power AC pump rated at 200 GPM at 150 PSI
One 10 horse power DC pump rated at 70 GPM at 40 PSI*

The pumps have been in service two years and have performed faultlessly. Thanks to the Sims Pump Company, the unit went commercial on time.”

**Roger W. Meyer
President
Tetrad Services Inc.
Turbine Generator & Rotating
Equipment Specialists**

