



Nytef Application Ideas

Giant Gear Survives Battle At Sea

Background: A major innovator in specialty underwater robotic equipment manufactures a wide variety of high-tech machinery designed to perform complex functions in a very harsh environment—undersea, often in conditions that typically defeat more traditional pieces of equipment. In many cases, completing the needed underwater function has extreme urgency, making equipment availability and durability a necessity.

Problem: Initially, many component parts were designed and machined from high quality stainless steel and other specialty alloys. In most cases, these were non-standard materials, adding relatively long lead times along with high cost. Additionally, soon after the original prototype designs were put to the test, the machines began breaking down, primarily due to the mariner’s ancient nemesis—the corrosive action of seawater, which has turned many an ocean-going vessel into a pile of rust.

Nytef Engineered Solution: Nytef’s experienced sales engineers soon determined that the problem was twofold; corrosion due to constant immersion in sea water, as well as part misalignment due the battering action of the sea and unexpected contact with underwater objects. The search for a suitable material soon focused on one of the workhorses of engineering plastics—UNITAL C black co-polymer acetal. Offering excellent corrosion resistance to saltwater, relatively high impact strength and immediate availability from stock, UNITAL C has solved this company’s problem quickly & economically.



This oversize UNITAL C gear offers much needed corrosion & impact resistance in a demanding underwater application.

Industries

- Aerospace
- Automotive
- Chemical
- Food/Beverage
- Petroleum
- Pharmaceutical
- Medical
- Semiconductor
- Transportation
- Packaging/Labeling

Materials

- Acetal
- Nylon
- PEEK
- PPS
- PBT
- PPO
- PVDF
- PEI (Ultem®)
- Polycarbonate
- Custom Filled

Nytef Customer Fulfillment Centers

- Philadelphia- 1620 Woodhaven Ave., Bensalem, PA
- Atlanta- 322 Northpoint Parkway, Acworth, GA
- Chicago- 1610 Jarvis Ave., Elk Grove Village, IL
- Los Angeles- 13185 Imperial Hwy., Whittier, CA
- West Palm Beach- 6643 42nd Terrace, North, FL

Nation-Wide Toll Free-- 800-646-9833

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www.nytefplastics.com
sales@nytef.com