

2006



Neil Pryde Sails International
Design and Technical Office

Classic Sails

INTERNATIONAL DESIGN AND TECHNICAL OFFICE

Classic Sails Overview

Contact:

*All material herein is protected by applicable copyright laws
Copyright 2006-2007 Neil Pryde Sails Int*

Neil Pryde Sails Int.
1681 Barnum Ave.
Stratford, CT 06614
Phone: 203-375-2626 • Fax: 203-375-2627
Email: admin@neilprydesails.com
Web: www.neilprydesails.com

Table of Contents

CLASSIC SAILS	1
DESIGN	2
SAILMAKING	2
SAILCLOTH	2
CROSS-CUT FABRICS	2
“CLASSIC” BALANCED FABRICS	2
HARDWARE	3
GAFF AND SQUARE SAILS	4
OVERVIEW	4
CONSTRUCTION.....	4
HEADSAILS	5
OVERVIEW	5
CONSTRUCTION.....	5
FINISHED PRODUCT	6
THE SAIL PLAN	6
THE SAILS	6

Neil Pryde Sails Overview

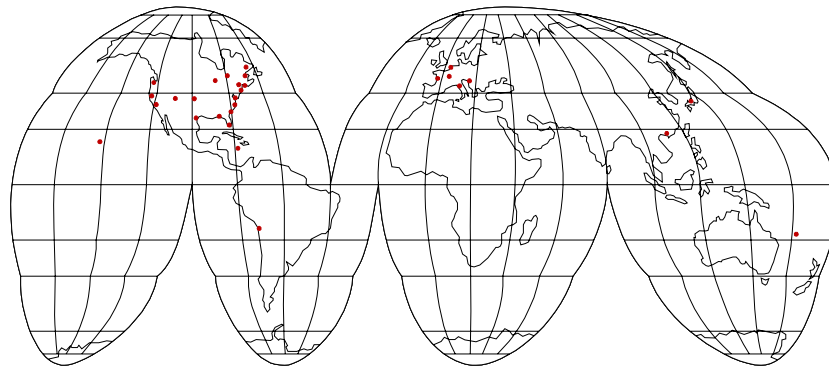
Neil Pryde Sails proudly uses the best first quality materials available in the marine industry today.

Classic Sails

Every Neil Pryde sail is the result of a combination of craftsmanship, technology and efficient manufacturing methods. Our extensive sailing and sailmaking experience, traditional handwork, attention to detail, high-tech tools such as computer aided design and manufacturing (CAD/CAM), computer driven cutters and special purpose sewing platforms unite to produce the finest of sails in the world today. The materials used in all Neil Pryde Sails are primarily produced in the U.S. by four main sailmaker suppliers; Challenge Sailcloth, Bainbridge Int., Dimension/Polyant and Contender USA.

As one of the world's largest sailmakers, Neil Pryde Sails has been involved with a variety of offshore cruising and Classic yachts over the years and continues that trend today. We have built sails for a wide variety of classic yachts of more conventional gaff configurations as well as square ships. Through an evolutionary process we developed techniques for handling these sails that are considered unusual by today's sailmakers. Our production facility is geared up to produce the highest quality Racing and Cruising sails available in today's market and at the most reasonable cost. Working closely with agents, such as Jim Leech, who supply the 'on the ground' support and expertise, they ensure that the customer has personal service and initial design parameters and details are correctly accounted for. We then design and oversee all stages of design and construction from our International Sales and Design office in Connecticut, USA using the latest in CAD/CAM development software linked via electronically to our new custom tailored production facility in China. The sails and hardware are constructed using the best materials (predominately U.S.A. manufactured) and then the sails are shipped via sea-freight or UPS depending on the needs and timetable of the client.

In addition, we have a worldwide distribution system of over 30 agents that are qualified and able to make repairs and/or handle service work the world over.



Design

Sailmaking

As part of the integration of computers and software within the marine industry, we work with many file formats to provide cross-company integration of CAD files. This coupled with our commitment to quality produces documents for each sail that are made available to our agents, giving them the ability to crosscheck specifications and final product. Classic sails require more than computer expertise, they require the hard earned knowledge of sailmaking that can only be gotten on the loft floor, working with the unusual requirements of four sided sails. To this end, we have years of experience and a broad database from which to work with that ensures the right fit, the right shape and the right construction. This experience than is taken into hand when we make the conversion from paper to digital information.

Sailcloth

We work closely with Challenge Sailcloth and Contender USA in developing the fabrics that will represent the best performance, longevity and value to our customers. ALL of our woven fabrics that we use in our sails, with the exception of our 3.8oz, which is manufactured by Teijin in Japan, come from these two suppliers. Through an aggressive manufacturer quality control system, and then through our own in-house testing procedures, which include INSTRON strip testing and visual testing for flatness, the fabric we use day to day is consistently the best we can buy

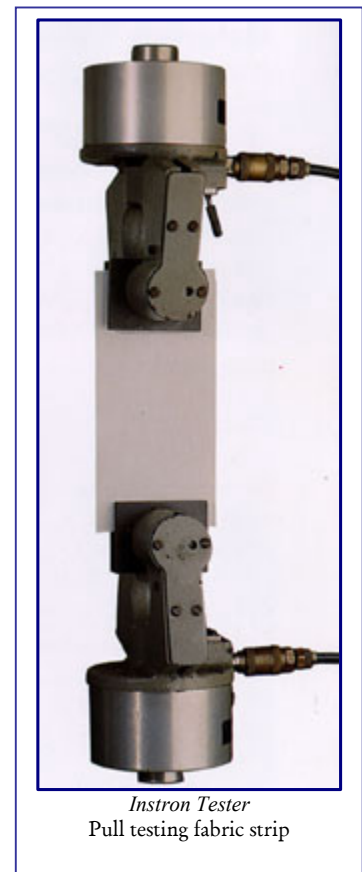
Challenge Dacron is finished 100% in-house (the largest U.S. based sailcloth manufacturer to do so). The fabric is heat-set, shrinking up to 20%. The Challenge durable Stabilized finish is achieved by immersing the fabric in a bath of suspended resin. The resin is absorbed by the fiber. The cloth is then fed into a long oven where the liquids are driven off, leaving the resin solids bonded to the fibers. The result is the tightest possible weave, lowest bias stretch, and maximum durability.

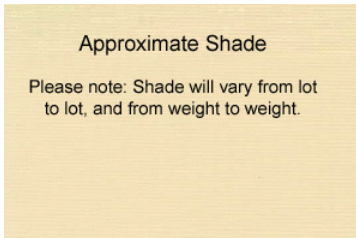
Cross-Cut Fabrics

Challenge fabrics use almost exclusively Dacron yarns and Type 52 High Tenacity High Modulus Dacron is used wherever possible, as we consider it the best sailcloth yarn in the world, due to its low stretch (for strong cross-cut leeches), and high shrinkage (translates into lowest bias stretch and best durability) Type 52, made for sailcloth, is only available in 220, 350, and 440 deniers. In yarn diameters where high tenacity is unavailable, standard Dacron is used in order to maintain the precisely engineered density ratios necessary to achieve maximum fill yarn efficiency, and lowest stretch.

“Classic” Balanced Fabrics

Woven balanced fabrics are intended for use in low aspect, square/gaff or workboat applications. The large warp yarns help to lock in the bias of the fabric while at the same time giving the fabric, ounce for ounce, much better longevity and U.V. life than comparable unbalanced constructions. In addition, these fabrics are available in both Cream and Tanbark colors. Production runs of these ‘traditional’ fabric colors are limited so it’s best to work in advance to ensure supplies.





Cream



Tanbark



Hardware

We use the industry best stainless steel external rings and hydraulically pressed stainless steel rings, coupled with quality New Zealand lines, and ropes. Importantly the sewing thread, which is an underrated but most important feature of ultimate product longevity, is the very best Hemingway & Bartlett Dabond 2002 polyester in various weights/sizes. Hardware is carefully selected for specific use on each sail and selection is based not only on working load applications but with long-term useful durability as well. Our primary supplier for hardware components is Bainbridge Int.

In addition, the use of external boltropes, hand-sewn rings, thimbles and brass 'into' hanks can be carried out for those in search of an authentic period look to their sails.



Metal Cleat with Stainless eyes



Stainless external ring with elk hide leather

Gaff and Square Sails

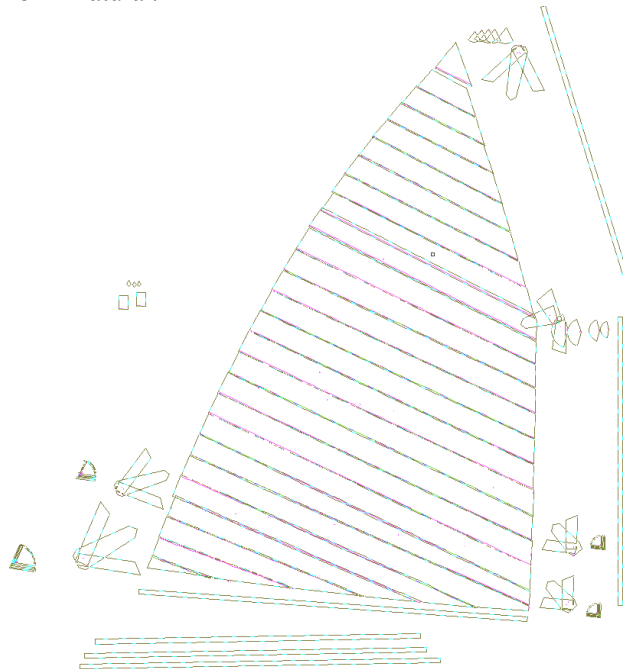
Overview

The design of traditional sails is carried out with our CAD software...but the similarities between modern and traditional quickly end as the finesse and traditional sailmaking skills required to understand and build classic sails comes to the forefront. Neil Pryde is pleased to have on its staff sailmakers with years of ‘on the floor’ experience and who have built classic sails in the traditional format and now with CAD. It is a labor-intensive effort to design classic sails, but one that results in a quality shaped and designed sail. Shown below is an exploded view of a gaff mainsail showing the complexities of design and prior to nesting for cutting on the computer driven cutting machine.



Construction

We make use of the best Hemingway Bartlett U.V. resistant thread (V-138) for longevity and durability. This coupled with traditional finger style patching makes for strong *and* traditional look. Reefs would be ‘banded’ from luff to leech to minimize cloth distortion while in reefed conditions. We can also provide ‘external’ boltropes for those looking to mimic classic sail construction. Gaff mainsails come in two flavors, with or without battens. This decision in large part depends on the final ‘look’ the customer is trying to achieve, with the latter being more traditional in appearance. Panel layouts are crosscut and the panels can be ‘split’ into narrow panels for a more traditional look. In the case of Tanbark or Cream sails, we can offer edge tapes, batten pockets and reefs all in matching color or in natural.



*Gaff Main with associated patches, tapes and reinforcements ready for nesting on the cutter.
(Note the traditional narrow panel style)*

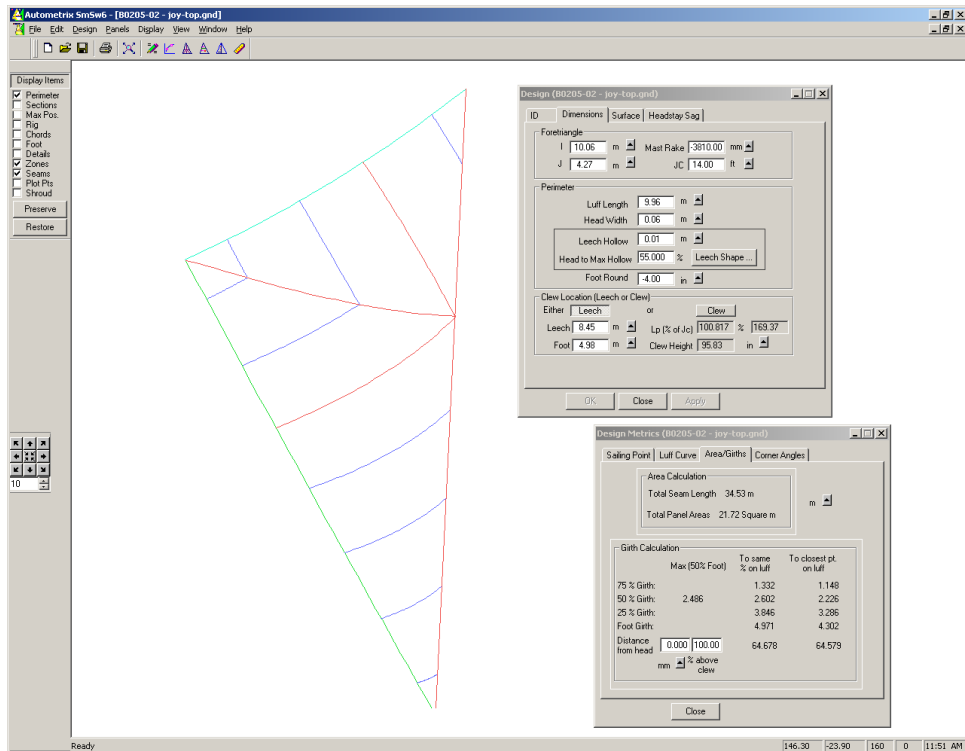
Headsails

Overview

The designs for the headsails fall into the conventional sail category and evolve from the many other headsails we have done for projects such as this. The most important criteria is in understanding the amount of headsail sag that is inherent in this type of rig and making the corresponding adjustments to the design to compensate. Panel layouts are crosscut with radiating foot/clew depending on final clew height and the panels can be 'split' for a more traditional look and miter cut for high clew 'flying jibs'.

Construction

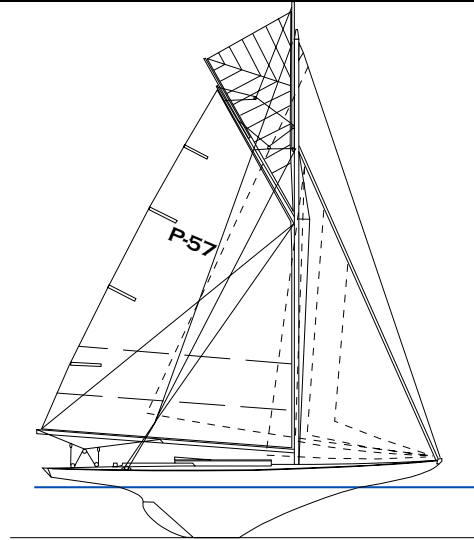
As with the mainsail we make use of the best Hemingway Bartlett U.V. resistant thread (V-138) for longevity and durability. This coupled with traditional finger style patching makes for strong *and* traditional look. We can also provide 'external' boltropes for those looking to mimic classic sail construction. In the case of Tanbark or Cream sails, we can offer edge tapes, batten pockets and reefs all in matching color or in natural.



Design Overview of a Jackyard Top'sl

Finished Product

The Sail Plan



The Sails

WoodenBoat
THE MAGAZINE FOR WOODEN BOAT OWNERS, BUILDERS, AND DESIGNERS

A Herreshoff P-boat Reborn
Salmon Trollers for Pleasure Use
Practical Power Cruisers
Using Wood Bleach
The Exquisite Bark-Canoe Models of E.T. Adney

NOVEMBER/DECEMBER 2002
NUMBER 169
\$5.99
\$7.99 in Canada
£3.95 in U.K.