



Domaille Engineering LLC

Engineered Solution

Success Brief

Developing Custom Optical Fiber Holding Fixture

Telecommunications Market

“Domaille produced a fixture that surpassed the OEM design in functionality and workmanship by a large margin”

Jon Winchester
Facilities Manager
Timbercon

Domaille Engineering utilizes Engineering to Manufacturing (E2M) process to successfully design and manufacture a unique customer solution.

Customer	<ul style="list-style-type: none"> Timbercon Inc., a market leader in optical fiber products
Product	<ul style="list-style-type: none"> Special optical fiber ferrule holding fixture
Challenge	<ul style="list-style-type: none"> Design a fixture for laser interferometer that was obsolete and not procurable
Results	<ul style="list-style-type: none"> Domaille designed a unique Cam Lock fixture that exceeded the original OEM components in functionality and workmanship
Impact	<ul style="list-style-type: none"> Customer is getting precise ferrule and end face measurements with formerly obsolete equipment
Next Step	<ul style="list-style-type: none"> Domaille is working with Timbercon on other ideas to help them eliminate expenses and gain market share



**Custom Fixture with
Cam Lock open and
closed**



**Spotlight: Domaille
Engineering to
Manufacturing (E2M)
Process**

- Custom design to accurately locate optical fiber ferrule.
- Significant design improvement from original OEM design.
- Saved customer from purchasing additional capital equipment.
- Ease of use has greatly improved inspection cycle time.

Challenge

Domaille Engineering's sales and marketing department received an inquiry from Timbercon Inc., who was interested in a special fixture to hold a ferrule in DORC laser interferometer. This expensive piece of capital equipment would not function due to a damaged fixture that holds the optical fiber ferrule in an exact position for testing. When it was functioning, it was difficult for Timbercon users to load and unload the ferrules. Domaille Engineering listened to Timbercon and worked with their engineering team to make the now obsolete piece of equipment function even better than the original.

Solution

Domaille's engineering team reviewed many different aspects of the interferometer process. The interferometer is a laser inspection machine that measures the end face geometry of optical fiber ferrules. The accuracy of the ferrule position is critical to getting consistent results. During this review, the team noticed that the current fixture design was only holding the ferrule on two points which caused distortion and inconsistent data. The Domaille team scrapped the existing OEM design and incorporated their unique Cam Lock design to locate and hold the optical fiber ferrule. This design applies equal pressure to circumference of the ferrule to both precisely hold the ferrule in the proper location and to eliminate distortion caused by pinching the ferrule at two points. This creative customer solution saved Timbercon from purchasing additional capital equipment and reduced their inspection cycle time. Here is what our customer had to say:

"I commissioned Domaille Engineering to design and fabricate a fixture for my laser interferometer that was obsolete and not procurable. They produced a fixture that surpassed the OEM design in functionality and workmanship by a large margin. The unique "cam lock" feature makes precise ferrule end face measurements more repeatable, and the craftsmanship was very impressive. Thank you."

Jon Winchester
Timbercon Inc.



Find a business solution that is right for your company.
Contact your Domaille Engineering representative at 507-281-0275
or visit our website: www.DomailleEngineering.com.