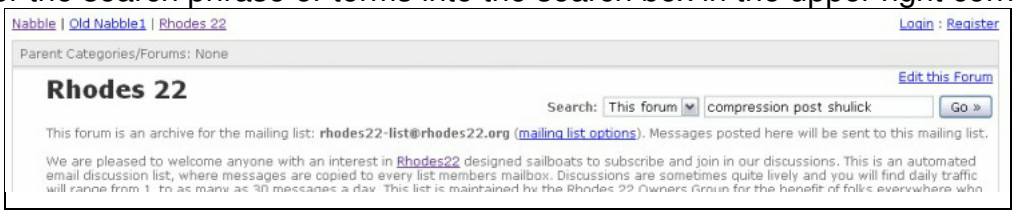
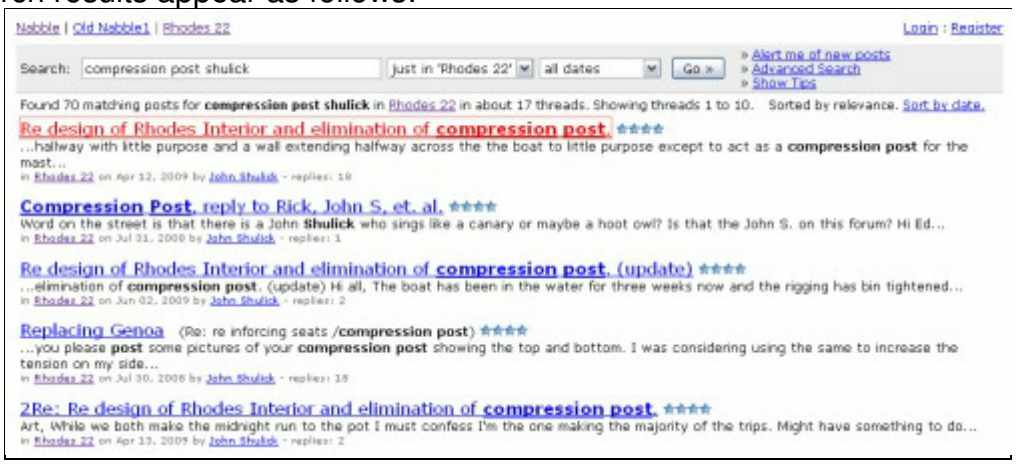
To search the archives, first go to: http://old.nabble.com/Rhodes-22-f14229.htm

and enter the search phrase or terms into the search box in the upper right corner:



The search results appear as follows:



and finally, clicking on the first link takes you to the page that John S referenced:

Re design of Rhodes Interior and elimination of compression post.

Re design of Rhodes Interior and elimination of compression post.

by John Shulick Apr 12, 2009; 12:41pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Hi everybody,

Over the last season I decided to change the interior of my 71 rhodes to reflect the way my wife and I use the boat. We are not small people and found the original Layout to be hard to move around in when cabin bound by weather. As we get on the boat friday nights and don't return to the dock until sunday afternoons we found the six foot nose birth a bit cramped. Also as the early rhodes did not have a fixed head we had a hallway with little purpose and a wall extending halfway across the the boat to little purpose except to act as a **compression post** for the mast. During the past few weekends I added a 2 ft. extension to the bow bed replaced the cabin floor, installed new carpeting and removed the original wall replacing it with 2 half walls and a **compression** arch over the cabin ceiling to accept the mast load. The arch you see in the following pictures is 1/2 in spring steel custom bent in a 100 ton press (I do live in Pgh. after all) I stood on the arch before I installed it and my 280 lbs. did not even make it flex. I feel pretty confidant it will work but will keep all informed in the event of failure. Enclosed are before and after shots.

John **Shulick**

Re: Re design of Rhodes Interior and elimination of compression post.

by Miracles Apr 12, 2009; 04:46pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

John

This looks like an entirely different boat inside! I like what you did!

But if you are spending all that time in it, what do you do for the
head?

My wife demanded the boat have at least a porta potti

I just use the V berth for storage on Miracles

Lou

On Apr 12, 2009, at 12:41 PM, John **Shulick** wrote:

>
> Hi everybody,
>
> Over the last season I decided to change the interior of my 71
> rhodes to
> reflect the way my wife and I use the boat. We are not small people
> and
> found the original Layout to be hard to move around in when cabin
> bound by
... [show rest of quote]

Lou Rosenberg
LSR Productions
Steadicam & Event Videography

MAIN # 917- 716- 7896

lsr3@...
steadilsr@...

Re: Re design of Rhodes Interior and elimination of compression post.

by cjlowe Apr 12, 2009; 05:55pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

John,

Thats the nice thing about having an old boat,we're not afraid to modify
our boats to more suit the way we'll use them. Thanks for **posting**, I
always like seeing what other people's handy work,I might like to copy.
Do you have the pop top enclosure?
Nice job on the arch and walls.

Jerry Lowe

> Hi everybody,
>
> Over the last season I decided to change the interior of my 71 rhodes to
> reflect the way my wife and I use the boat. We are not small people and
> found the original Layout to be hard to move around in when cabin bound by
> weather. As we get on the boat friday nights and don't return to the dock
> until sunday afternoons we found the six foot nose birth a bit cramped.
> Also
> as the early rhodes did not have a fixed head we had a hallway with little
... [show rest of quote]

Re: Re design of Rhodes Interior and elimination of compression post.

by Blue Heron Apr 12, 2009; 08:52pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Hi John,

Your pictures show some nice wide open spaces. However, it is hard to tell where the downward load on the arch goes. Are the the bulkheads or "half walls" supporting the arch supported by a stringer or perhaps a direct path the the keel?

Rick

On Sun, Apr 12, 2009 at 12:41 PM, John **Shulick** <jsbudda@...> wrote:

> Hi everybody,
>
> Over the last season I decided to change the interior of my 71 rhodes to
> reflect the way my wife and I use the boat. We are not small people and
> found the original Layout to be hard to move around in when cabin bound by
> weather. As we get on the boat friday nights and don't return to the dock
> until sunday afternoons we found the six foot nose birth a bit cramped.
> Also
... [show rest of quote]

_____
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_____

Re: Re design of Rhodes Interior and elimination of compression post.

by John Shulick Apr 12, 2009; 09:12pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Lou,

The porta potty sits just inside the entrance to the cabin on the port side. On the newer Rhodes that is where where one of the ends of the u shaped couch is (suffering from lack of proper words here) As my wife and myself are ex theatre people we got over hang ups about bodily functions a long time ago.
When under way with company the hatch door can be slid in place should privacy be required.

John S

Re: Re design of Rhodes Interior and elimination of compression post.

by John Shulick Apr 12, 2009; 09:18pm :: Rate this Message: - Use ratings to moderate (?)

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Jerry,

Pop top enclosure is on the to do list. Weather permitting I sling a 8X10 tarp over the boom and attach to various points with 8 bungie cords. Then I can leave the top up overnight. Helps keep the morning dew down in the cockpit area as well.

John S

Re: Re design of Rhodes Interior and elimination of compression post.

by John Shulick Apr 12, 2009; 09:59pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Hi Rick,

It is my understanding that putting a load in the center of the arch would try to flatten the arch out which would transfer the load to the corners of the bulkheads. those bulkheads were cut using the original wall which I removed in one piece and am saving just in case. They fit flush to the cabin interior. The starboard bulkhead is sitting directly on the original stringer (see first pict) the port side is offset by 1/4" because the bench seat rests on that side and is held by screws. any additional load is also carried to the keel by the 1x2 hard wood boards that look like trim pieces. To install the arch I had to first wedge it into one of the corners and then use a piece of wood (the original **post** worked quite well) and pre load the cabin ceiling. Once you have the other end held up you CAREFULLY use a SMALL hammer to slide the arch into place. The arch is held in place by that tension and although there

are no screws I can't budge it and I am a strong person. I feel pretty confident that when the mast is up and the rigging tightened the whole thing should tighten up even more. Note: IF the bulkheads were extended all the way into the corners where the hull and deck meet AND then glassed in you could then shorten the the spreaders on the mast and the stays could be moved to the cabin top attaching through the roof and directly to the bulkheads. That would allow a genoa track to be installed in the corner where the deck and cabin wall meet allowing higher pointing ability. The bulkheads would transfer the heeling forces and the cabin roof would not carry the load. But I'm not ready to try that yet.

Best
John S

> **Blue Heron wrote:**
>
> Hi John,
>
> Your pictures show some nice wide open spaces. However, it is hard to tell where the downward load on the arch goes. Are the the bulkheads or "half walls" supporting the arch supported by a stringer or perhaps a direct path the the keel?
>
> Rick
>
> On Sun, Apr 12, 2009 at 12:41 PM, John **Shulick** <jsbudda@verizon.net> wrote:
> ... [show rest of quote]

Re: Re design of Rhodes Interior and elimination of compression post.

by Caesarsailor Apr 12, 2009; 10:14pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Hi John,
It looks like you created a lot of open space in your interior. You certainly have more room for use of the porta potty as you don't need the privacy.

It's great to have the skill to do what you did. Keep us **posted** about how it works out for you. I am saving the pictures of your modification; you never can tell what one may want to do.

It looks good. Thanks for sharing.

Caesar

--- On Sun, 4/12/09, John **Shulick** <jsbudda@...> wrote:

From: John **Shulick** <jsbudda@...>
Subject: [Rhodes22-list] Re design of Rhodes Interior and elimination of **compression post**.
To: rhodes22-list@...
Date: Sunday, April 12, 2009, 9:41 AM

Hi everybody,

Over the last season I decided to change the interior of my 71 rhodes to reflect the way my wife and I use the boat. We are not small people and found the original Layout to be hard to move around in when cabin bound by weather. As we get on the boat friday nights and don't return to the dock until sunday afternoons we found the six foot nose birth a bit cramped. Also as the early rhodes did not have a fixed head we had a hallway with little purpose and a wall extending halfway across the the boat to little purpose except to act as a **compression post** for the mast. During the past few weekends I added a 2 ft. extension to the bow bed replaced the cabin floor, installed new carpeting and removed the original wall replacing it with 2 half walls and a **compression** arch over the cabin ceiling to accept the mast load. The arch you see in the following pictures is 1/2 in spring steel custom bent in a 100 ton press (I do live in Pgh. after all) I stood on the arch before I installed it and my 280 lbs. did not even make it flex. I feel pretty confidant it will work but will keep all informed in the event of failure. Enclosed are before and after shots.

John **Shulick**
http://www.nabble.com/file/p23012525/johns%2B2007%2Bhome%2Bpics-058.jpg
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http://www.nabble.com/file/p23012525/DSCF0257.jpg
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http://www.nabble.com/file/p23012525/DSCF0261.jpg

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View this message in context: http://www.nabble.com/Re-design-of-Rhodes-Interior-and-elimination-of-**compression-post**.-tp23012525p23012525.html
Sent from the Rhodes 22 mailing list archive at Nabble.com.

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_____

Re: Re design of Rhodes Interior and elimination of compression post.

by Hank-5 Apr 12, 2009; 10:21pm :: Rate this Message: - Use ratings to moderate (?)

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John,

There was a conversation about moving the stays and the common thought as I remember it was that the cabin top is not stressed for this. You'd have to transfer the load directly to the bulkhead which would have to be well anchored to the keel of stringers, I believe. Is this what you are talking about?

Hank

On Sun, Apr 12, 2009 at 9:59 PM, John **Shulick** <jsbudda@...> wrote:

>
> Hi Rick,
>
> It is my understanding that putting a load in the center of the arch would
> try to flatten the arch out which would transfer the load to the corners of
> the bulkheads. those bulkheads were cut using the original wall which I
> removed in one piece and am saving just in case. They fit flush to the
> cabin
> interior. The starboard bulkhead is sitting directly on the original
... [show rest of quote]

Re: Re design of Rhodes Interior and elimination of compression post.

by John Shulick Apr 13, 2009; 08:25am :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Hank,

You are correct, the load must be transferred to the bulkhead and the bulkead needs to be securely attached to the hull/deck /cabintop to distribute the load. In addition since moving the stays inboard will reduce the mechanical advantage, the boat should stiffen up a bit with regards to heeling. The load on the stays will increase so I would also consider moving up to 5/32 wire rather than using the standard 1/8

John S

Re: Re design of Rhodes Interior and elimination of compression post.

by Rik Sandberg-2 Apr 13, 2009; 09:09am :: Rate this Message: - Use ratings to moderate (?)

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Hank, John S,

Moving the stays inboard will not change the stiffness of the boat. All that will change, is the load on the stays (upward) and the mast step (downward) which will increase quite dramatically.

Assuming no change to the shape of the hull, there are really only two ways to make your boat a stiffer sailer. Add or move ballast lower in relation to the center of gravity. Or, lower the center of effort of the sail plan.

Rik

On Mon, Apr 13, 2009 at 7:25 AM, John **Shulick** <jsbudda@...> wrote:

>
> Hank,
>
> You are correct, the load must be transferred to the bulkhead and the
> bulkead needs to be securely attached to the hull/deck/cabintop to
> distribute the load. In addition since moving the stays inboard will reduce
> the mechanical advantage, the boat should stiffen up a bit with regards to
> heeling. The load on the stays will increase so I would also consider
> moving
... [show rest of quote]

Re: Re design of Rhodes Interior and elimination of compression post.

by John Shulick Apr 13, 2009; 11:11am :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Hi Rik,

I understand the load on the stays increases with the reduction of mechanical advantage. But dosent the boat have a certain moment of inertia which must be over come for the boat to begin heeling. Or is that factor so low as to be meaningless in the calculation? Also do you have the background to calculate how much the load would be increased over the standard rigging? I haven't done that type of math for 35 yrs.

Thank you for your input

John S

Re: Re design of Rhodes Interior and elimination of compression post.

by Ben Schultz Apr 13, 2009; 11:59am :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Wow, that's a hell of a project. The obvious question: don't you find a need for a head between Friday and Sunday?

We did an Easter overnighter this past weekend. I'll write up a little story about our adventure in the next couple of days.

-----Original Message-----
From: rhodes22-list-bounces@...
[mailto:rhodes22-list-bounces@...] On Behalf Of John **Shulick**
Sent: Sunday, April 12, 2009 11:41
To: rhodes22-list@...
Subject: [Rhodes22-list] Re design of Rhodes Interior and elimination of **compression post**.

Hi everybody,

Over the last season I decided to change the interior of my 71 rhodes to reflect the way my wife and I use the boat. We are not small people and found the original Layout to be hard to move around in when cabin bound by weather. As we get on the boat friday nights and don't return to the dock until sunday afternoons we found the six foot nose birth a bit cramped. Also as the early rhodes did not have a fixed head we had a hallway with little purpose and a wall extending halfway across the the boat to little purpose except to act as a **compression post** for the mast. During the past few

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Re: Re design of Rhodes Interior and elimination of compression post.

by Ronald Lipton-3 Apr 13, 2009; 12:40pm :: Rate this Message: - Use ratings to moderate (?)

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Assuming that you want the same horizontal component of the force to support the mast
it is scales with the the sine of the angle the stay makes with the mast. Assuming a 20 ft
mast and ~45 inch mast-to-stay distance you would need to increase the stay tension by
15% to bring the stays in by 6".

Ron

John **Shulick** wrote:

> Hi Rik,
>
> I understand the load on the stays increases with the reduction of
> mechanical advantage. But dosent the boat have a certain moment of inertia
> which must be over come for the boat to begin heeling. Or is that factor so
> low as to be meaningless in the calculation? Also do you have the background
> to calculate how much the load would be increased over the standard rigging?
> I haven't done that type of math for 35 yrs.
>
... [show rest of quote]

_____
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_____

Re: Re design of Rhodes Interior and elimination of compression post.

by Rik Sandberg-2 Apr 13, 2009; 01:10pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

John,

"I understand the load on the stays increases with the reduction of mechanical advantage."

Agreed, and your suggestion of a step up in wire size is probably a prudent one.

"But doesn't the boat have a certain moment of inertia which must be over come for the boat to begin heeling. Or is that factor so low as to be meaningless in the calculation?"

All that is not really relevant to what you are talking about changing. To picture this in a simple way, imagine a brick sitting in your driveway. Now imagine you put a stick into one of the holes in the brick and pull on the top of the stick until the brick tips over. Would it make any difference in the amount of effort required if you took a string and tied it from the top of the stick to the outside of the brick?? No ... the only thing the string would do is help hold the stick in the same position, relative to the brick. The only way to change the effort required for this is to 1. change the length of the stick, which would represent changing the height of the center of effort from the sail plan. OR, 2. change the shape or weight of the brick, which represents the hull and it's ballast..

"Also do you have the background to calculate how much the load would be increased over the standard rigging?"

No, unfortunately I am "math" challenged. I am a backyard crowbar physicist. However, if Stan should see this, I have no doubt that he would tell you what I have said is right. He is a N/A and can do the math. Or you could ask someone like Brion Toss who is a well known expert sail rigger.

http://www.briontoss.com/

Rik

On Mon, Apr 13, 2009 at 10:11 AM, John **Shulick** <jsbudda@...> wrote:

> Hi Rik,
>
> I understand the load on the stays increases with the reduction of
> mechanical advantage. But dosent the boat have a certain moment of inertia
> which must be over come for the boat to begin heeling. Or is that factor so
> low as to be meaningless in the calculation? Also do you have the
> background
> to calculate how much the load would be increased over the standard
... [show rest of quote]

Re: Re design of Rhodes Interior and elimination of compression post.

by Blue Heron Apr 13, 2009; 07:16pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

John,

Unlike your stringer, the one in my '93 model in about the same place is not supported directly by the keel. So in your case, the bulkheads supporting the arch should transfer **compression** from the mast to the keel through the stringer.

However, I do have a concern that if the mast **compression** causes your arch to straighten out, the arch would force the bulkheads outward, causing the hull and cabin roof to deform. That's the same risk I face by having stepped a **compression post** on my unsupported stringer.

Rick

On Sun, Apr 12, 2009 at 9:59 PM, John **Shulick** <jsbudda@...> wrote:

>
> Hi Rick,
>
> It is my understanding that putting a load in the center of the arch would
> try to flatten the arch out which would transfer the load to the corners of
> the bulkheads. those bulkheads were cut using the original wall which I
> removed in one piece and am saving just in case. They fit flush to the
> cabin
> interior. The starboard bulkhead is sitting directly on the original
... [show rest of quote]

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_____

Re: Re design of Rhodes Interior and elimination of compression post.

by John Shulick Apr 13, 2009; 07:20pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Hi Ben,

The head issue was answered in a previous **post** addressed to Lou the Miracle Worker.

John S.

> **benonvelvetelvis wrote:**
>
> Wow, that's a hell of a project. The obvious question: don't you find a need for a head between Friday and Sunday?
>
> We did an Easter overnighter this past weekend. I'll write up a little story about our adventure in the next couple of days.
>
> -----Original Message-----
> From: rhodes22-list-bounces@rhodes22.org
> [mailto:rhodes22-list-bounces@rhodes22.org] On Behalf Of John **Shulick**
... [show rest of quote]

Re: Re design of Rhodes Interior and elimination of compression post.

by John Shulick Apr 13, 2009; 09:04pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Rik,

Thank you for sticking with me on this subject I see your point of view much more clearly now. You got me 85% convinced and I find myself hoping Stan sees this and chimes in as he is the pro and I am an armchair putz when it comes to sailboat design.

John S

> **Rik Sandberg-2 wrote:**
>
> John,
>
> "I understand the load on the stays increases with the reduction of mechanical advantage."
>
> Agreed, and your suggestion of a step up in wire size is probably a prudent one.
>
> "But doesn't the boat have a certain moment of inertia
> which must be overcome for the boat to begin heeling. Or is that factor so
... [show rest of quote]

Re: Re design of Rhodes Interior and elimination of compression post.

by John Shulick Apr 13, 2009; 09:20pm :: Rate this Message: - Use ratings to moderate (?)

Reply | Print | View Threaded | Show Only this Message

Rick,

It is my thought that the force required to flatten that arch would mean the standing rigging is way to tight but I will measure the arch deflection and the distance between the bulkheads both before and after stepping the mast to check for distortion. Last year I had 250 lbs of force on the side stays and 100 on the baby stays as measured by the infamous Loos gage. Delilah goes in the water May 15 so I'll
keep everyone informed.

John S

> **Blue Heron wrote:**
>
> John,
>
> Unlike your stringer, the one in my '93 model in about the same place is not supported directly by the keel. So in your case, the bulkheads supporting the arch should transfer **compression** from the mast to the keel through the stringer.
>
> However, I do have a concern that if the mast **compression** causes your arch to straighten out, the arch would force the bulkheads outward, causing the hull and cabin roof to deform. That's the same risk I face by having
> ... [show rest of quote]

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