



## Meeting the Needs of a Growing Stripper Foil Community with a Dedicated User Forum.

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# What has perpetuated the need for a User Forum?

- ▶ The Arizona Carbon Foil Co., Inc. (ACF-Metals) has been providing accurately characterized carbon foils to the international accelerator community for almost 50 years.
- ▶ One major component, included with the actual product, has been the personal attention, the one-on-one time, that users have had with our in-house Physicist and Target Specialists.
- ▶ The opportunity to discuss experiments, trouble shoot, and get meaningful feedback has been a viable component to the whole ACF-Metals offering. In the past, before even internet, this was all done via letter writing, phone calls, and at conferences. With the internet, came the wonderful ease of email, and we have been able to continue providing our community with helpful information this way.
- ▶ There is one aspect to our communication with our customers, and other users, that has not been given the opportunity to grow, and this is the communication within the worldwide accelerator community. We have been informally providing a conduit of information, and sharing it with users as they would ask questions. Users are getting the information third party so to speak. Not ideal.
- ▶ This has perpetuated the need for a dedicated User Forum.

# Who will use the Forum, and why?

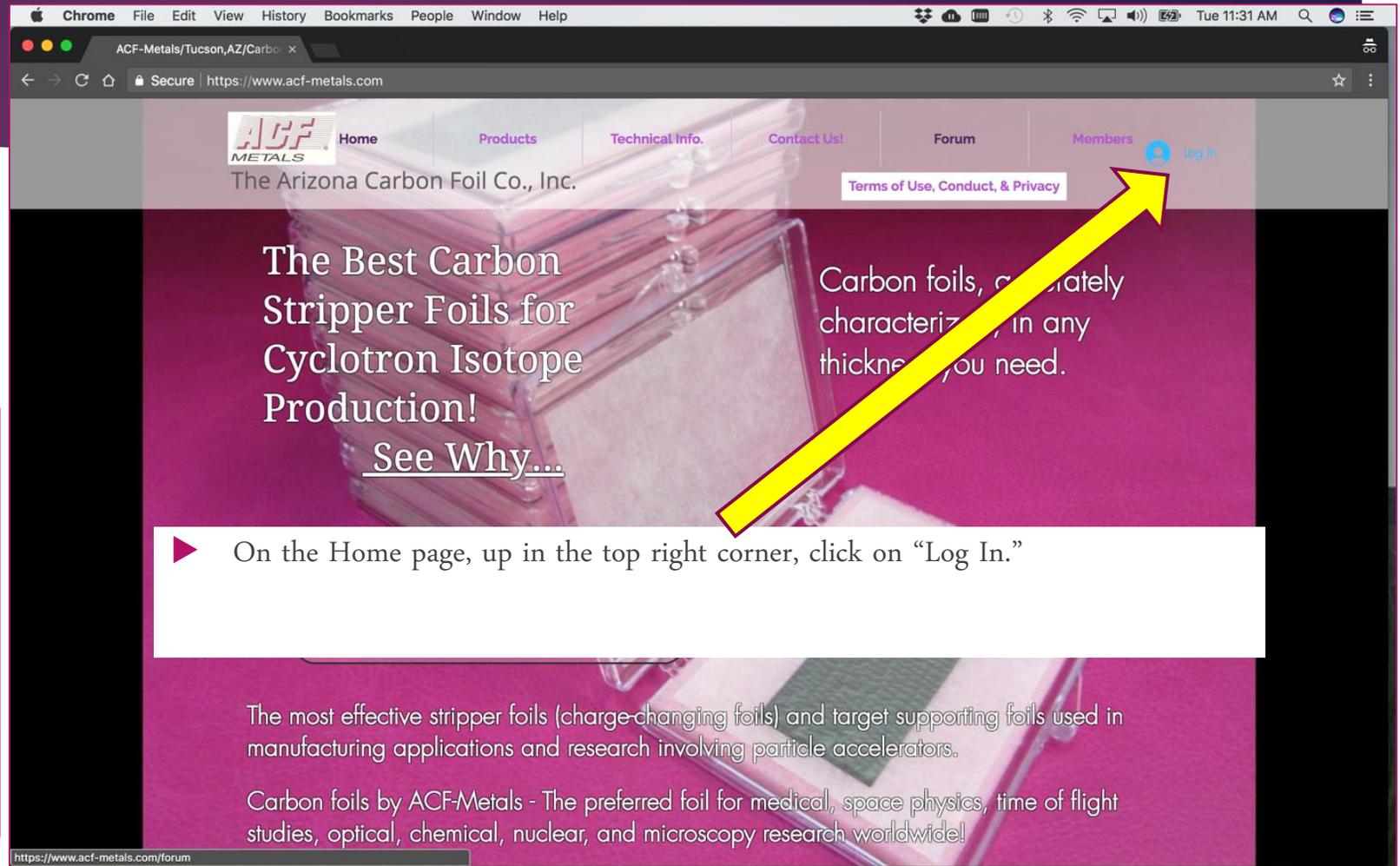
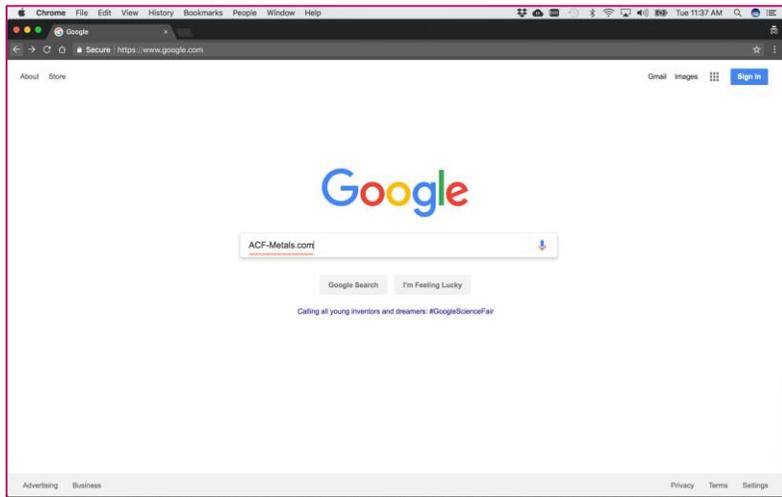
- ▶ ACF-Metals has developed a User Forum to meet the communication demand, thus enabling accelerator users from all over the world, with all levels of experience, various backgrounds, and diverse fields to communicate directly.



- ▶ Members of the Forum will be able to share important techniques, ask questions directly, share their ideas, all of which is specific to their equipment, applications, and production, involving extractor foils.

# How do you access the Forum?

- ▶ In order to access the Forum, simply do a Google search for **ACF-Metals**, the Forum is located on our website Home page.



- ▶ On the Home page, up in the top right corner, click on "Log In."

# Signing Up

- ▶ This takes you to a “**Sign Up**” page. If you are **NEW**, you will put in your email, create a password, and by signing up you agree to the **Terms of Use**, which are available on the website.
- ▶ When you press the green “Go” button, your request is submitted to ACF-Metals, and you will receive an email confirmation that you are now a member of the website Forum.

Chrome File Edit View History Bookmarks People Window Help Tue 11:32 AM

ACF User Forum | ACF-Metals

Secure | https://www.acf-metals.com/forum

## Sign Up

constance@ACF-Metals.com

.....

.....

Go

Sign up with Facebook

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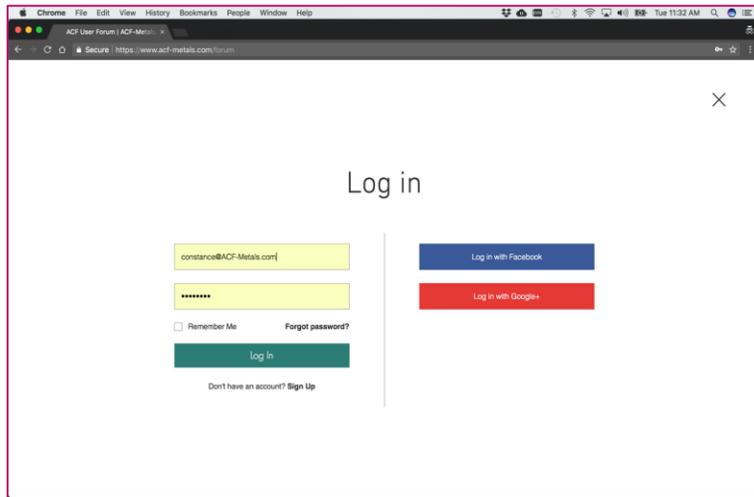
Already a member? [Log in](#)

Join this site's community. [Read more](#)

By signing up, you agree to our [Terms of Use](#)

# Log In and the Option to Create a Profile

- ▶ Now as an approved member, you can “Log In” and participate in the Forum.



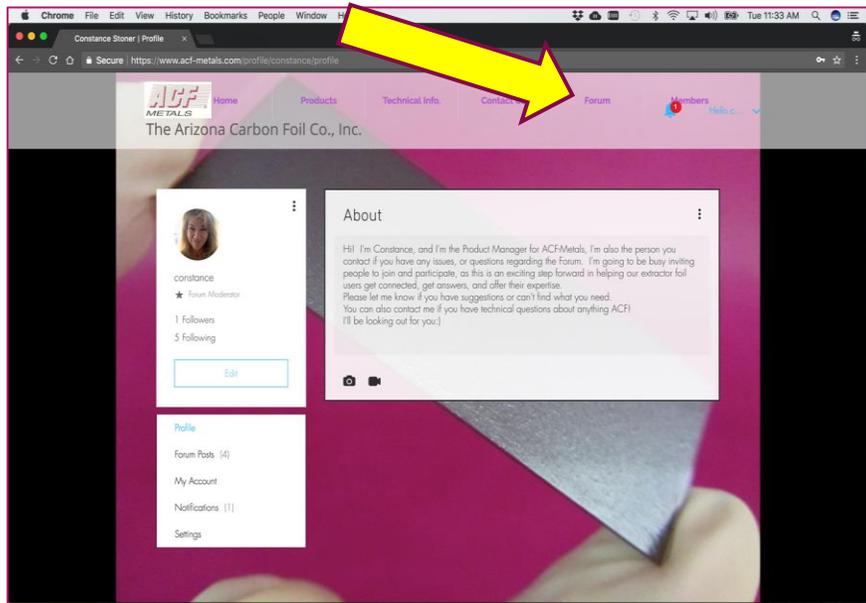
- ▶ Once you are logged in, the top right corner will say “Hello...” and your name.

A screenshot of the ACF-Metals.com website. The top navigation bar includes 'Home', 'Products', 'Technical Info.', 'Contact Us!', 'Forum', and 'Members'. The main content area features a large image of a person using a carbon foil stripper. Text overlays on the image include 'The Best Carbon Stripper Foils for Cyclotron Isotope Production! See Why...', 'Carbon foils, accurate characterized, in any thickness you need.', and 'Carbon foils by ACF-Metals - The preferred foil for medical, space physics, time of flight studies, optical, chemical, nuclear, and microscopy research worldwide!'. In the top right corner, a user is logged in, and a dropdown menu is open, showing options for 'Profile', 'My Account', and 'Log Out'. A yellow arrow points from the 'Hello...' text in the first bullet point to the user's name in the top right. Another yellow arrow points from the 'Profile' option in the dropdown menu to the text in the second bullet point.

- ▶ Right next to “Hello...” is a small blue arrow, you can select **Profile** from the drop down menu, and this is where you can put in any information you want to share about yourself with other users.

# Getting from your profile to the Hub

- ▶ From your Profile, you can click on the word “**Forum**” in the menu bar.



- ▶ Currently, in the Hub there are four main categories. Each category has any number of potential topics it can contain. Let's click on the first category, **The Basics**.

The Arizona Carbon Foil Co., Inc.

ACF User Forum

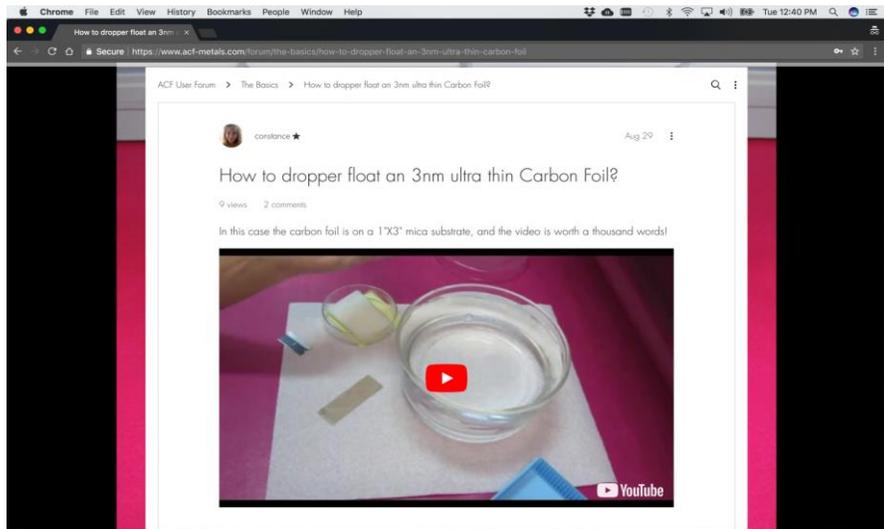
ACF User Forum

Accelerator and Cyclotron Users share ideas, questions, and techniques when using stripper foils.

	<b>The Basics</b> Topics in here are relevant to the day-to-day use of ...	12 Views	1 Posts	⋮
	<b>Topics by Cyclotron Type</b> Discussions here are specific to the type of cyclotron...	17 Views	0 Posts	⋮
	<b>Accelerators Specifically</b> Accelerator users discuss specific areas of interest w...	0 Views	0 Posts	⋮
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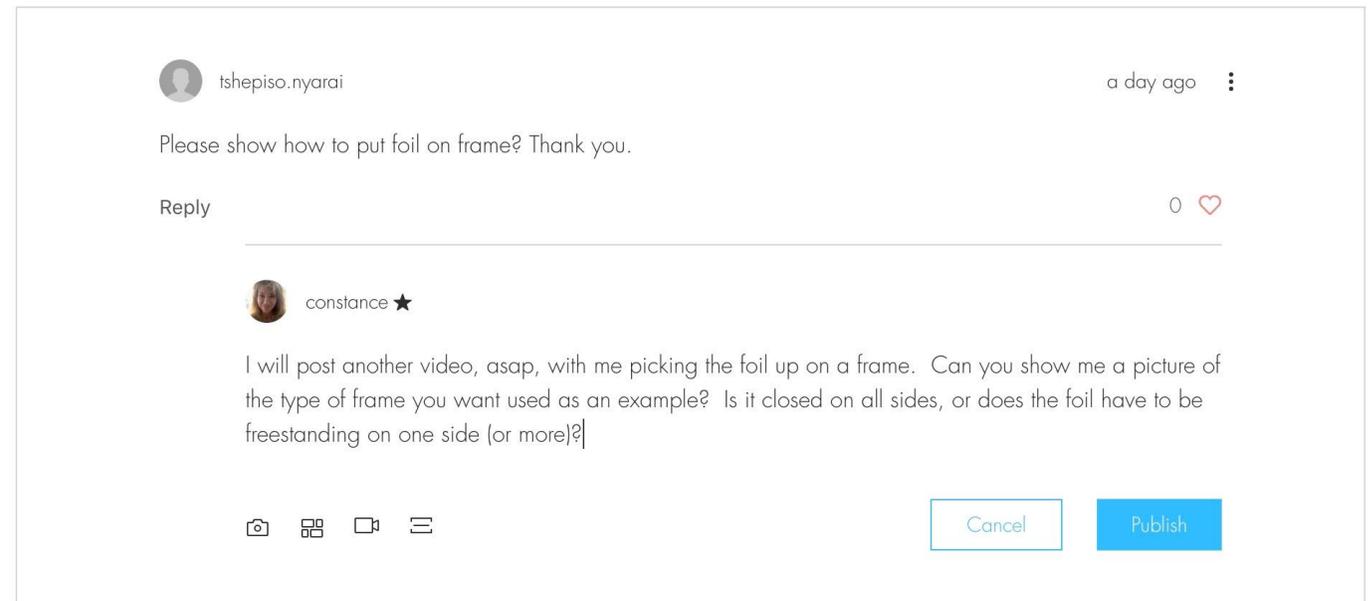
# The Basics Category

- ▶ Here is where I expect we will have the most frequently asked questions with regard to handling stripper foils.
- ▶ I posted this video after a customer expressed their frustration with floating foils.



A different User sends a short response to the video, requesting the next step, “Please show how to put foil on frame?”.

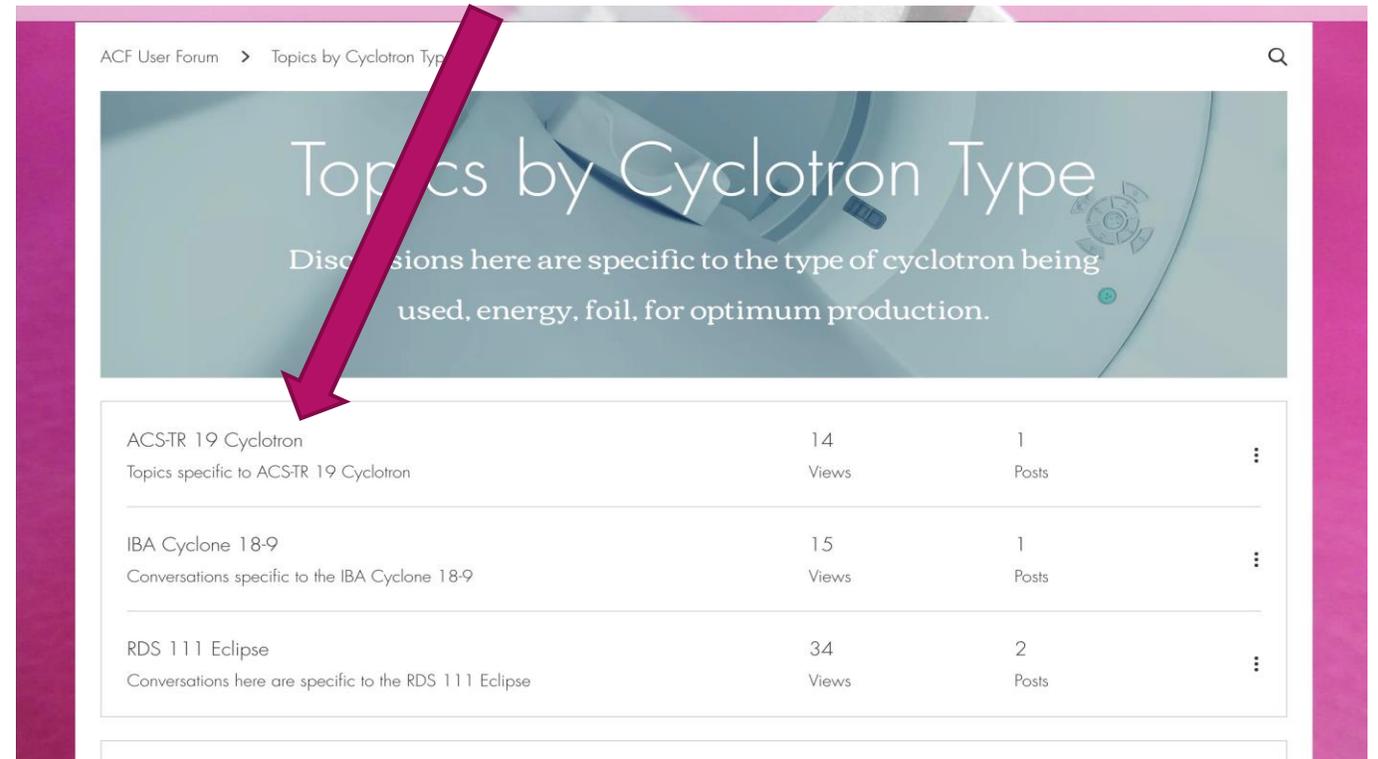
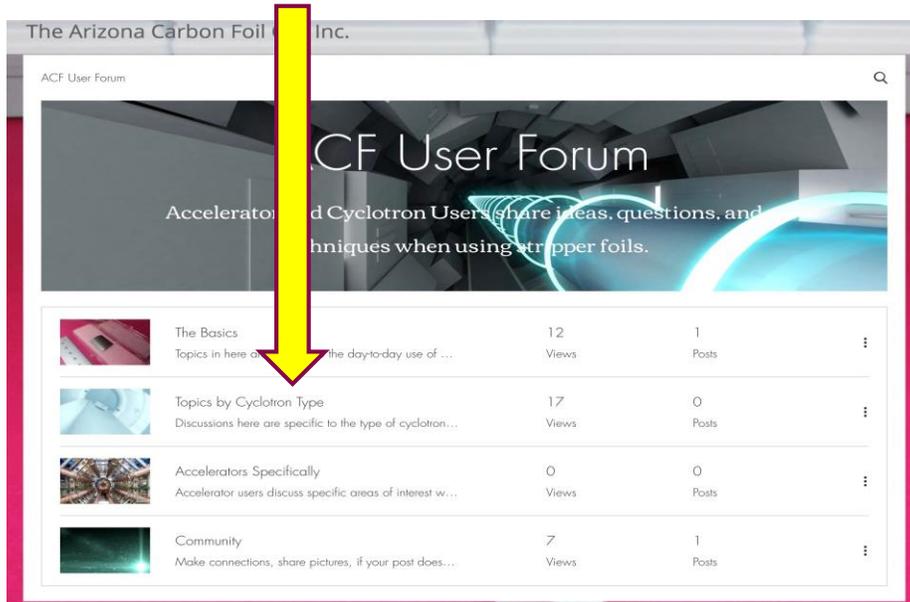
- ▶ I then responded by asking the member for more information regarding her frame. She can choose to supply the information to me on the forum, or privately. I intend to post another video or provide suggestions for her once I have more information about her frame.



# Topics by Cyclotron Type

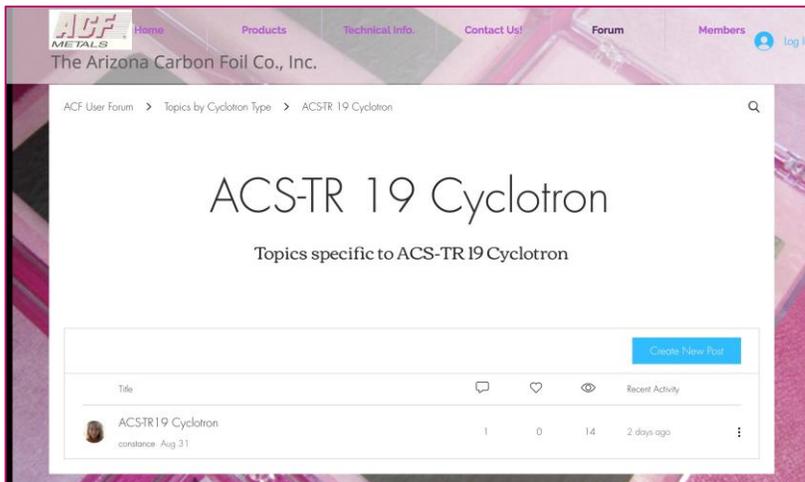
- ▶ Now, if we scroll back up to the top, and click on "Forum" this takes us back to the hub and we can look at the second category, "Topics by Cyclotron Type".

- ▶ We click on it, and it opens up, now if we scroll down we have the option of creating a New Post, or selecting one of the existing cyclotron categories. I'll select the first one, the "ACS-TR 19 Cyclotron".

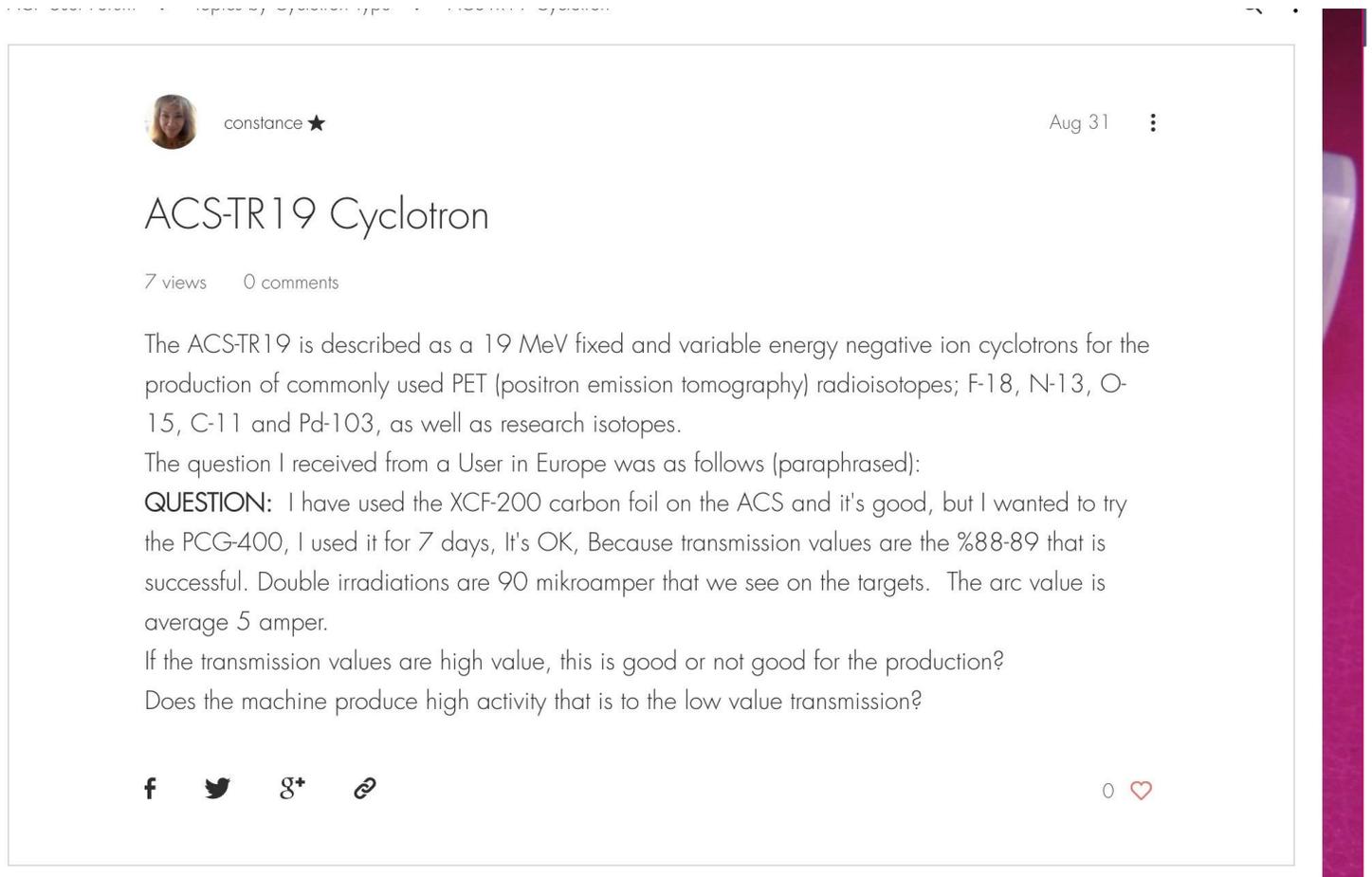


# ACS-TR 19 Question

- ▶ There is presently one post in this cyclotron category.



- ▶ In this case, one of our customers has asked me a question, and I have posted their question on the Forum. Notice, this is a question that is best answered by another cyclotron technician.



# ACS-TR 19 Reply

- ▶ One member does post a comment, they give credit to their personal source.
- ▶ I, in turn, am able to contact our customer and encourage them to check out the Forum, and see if the information is helpful. This is one way I'm using to encourage users to check out the Forum.
- ▶ Transitioning Users to the Forum will take a little time, but so far, the reception has been very positive.



tim.irizarri

2 days ago ⋮

This is a borrowed answer from my friend, DP.

"The activity level produced depends on the target and beam strike area. The target design must be such that the water being bombarded can circulate for cooling and thus the water will stay in the beam strike area. If the transmission is very high,

(> ~92%) the beam will keep the water pushed to the sides of the target cavity and can bore through the water to the back of the target cavity = less yield and damage to the target. If the beam transmission is low (<~60%) the water will have equal heat (from beam energy) dissipated across the water and it will not circulate for cooling and the pressure inside the target will increase to a possible failure of target window (foil).

The correct transmission, with the beam hitting slightly low on the water, will produce the most activity per beam energy and time. Every cyclotron - target combination has to be tuned for best target production. Even the beam shape itself will determine production capability.

For example, a cracked stripper foil will produce a beam that is unequal across the target area and thus a hot spot is produced that causes erratic water beam strike and bad yields. Must learn characteristics of a cyclotron to get best production."

Reply

0 ❤️

# IBA Cyclone 18-9 Question

- ▶ Now, I want to go and look at the second category of cyclotrons, the **IBA Cyclone 18-9**

The screenshot shows the ACF Metals website forum. The top navigation bar includes links for Home, Products, Technical Info, Contact Us!, Forum, and Members. The main content area displays a forum post titled "IBA Cyclone 18-9" by user "constance". The post includes a question and an answer regarding carbon foil recommendations for the IBA Cyclone 18-9 cyclotron. A yellow arrow in the inset image points to the "IBA Cyclone 18-9" category in the forum's sidebar.

ACF METALS Home Products Technical Info. Contact Us! Forum Members

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ACF User Forum > Topics by Cyclotron Type > IBA Cyclone 18-9

constance ★ Aug 31

## IBA Cyclone 18-9

11 views 2 comments

This user 'inherited' their position/machine, and was looking for some helpful information.

**QUESTION:** "I am using the IBA Cyclone 18-9, can you recommend the best carbon foil to use, and any data with respect to operating parameters using the recommended foil?"

**ANSWER:** "I am told the PCG-1000 is used with this particular machine, depending on what you are making, or perhaps the tightness of the beam. However I will ask around, and get some other input."

f t g+ e 0 ❤️

Topic	Views	Posts
ACSTR 19 Cyclotron	14	1
IBA Cyclone 18-9	15	1
RDS 111 Eclipse	34	2

# IBA Cyclone 18-9

## Reply

- ▶ One member posts a Reply, and then I received a Reply via email, and posted that as well.
- ▶ Note that the information the actual technician can provide is exactly what is needed.
- ▶ The value of having a place where users with varying levels of experience can communicate directly is reinforced.



tshepiso.nyarai

a day ago



PCG are more forgiving when it comes to mounting process and appear, by beam on foil time, to last longer, at least for the lower energy. Arc evap version is more easy to break than PCG. Also from experience, with humidity, the foils react different to absorption of water. The arc evap maybe hold more moisture, the cyclotron must pump down and dry out the foil, or it will explode with the water upon beam strike. The PCG is better about staying dry.

Reply

0



constance ★

a day ago



Here is an answer submitted to me directly on this question:

"You are right that the PCG-1000 would typically be used on the 18-9.

The problem is how tight of beam, transmission wise, you want to have on a beam line.

The typical 18-9 has varying beam line tightness and if you want really tight beam (>85% transmission) #1 beam line then you could use PCG-400 but you can use PCG-1000 for good tightness (>70%) but the PCG-1000 foil would cause the beam on #4 to be exploded to double what it is on #1 (45% -60%). You would need PCG-400 on #4 to get tighter beam."

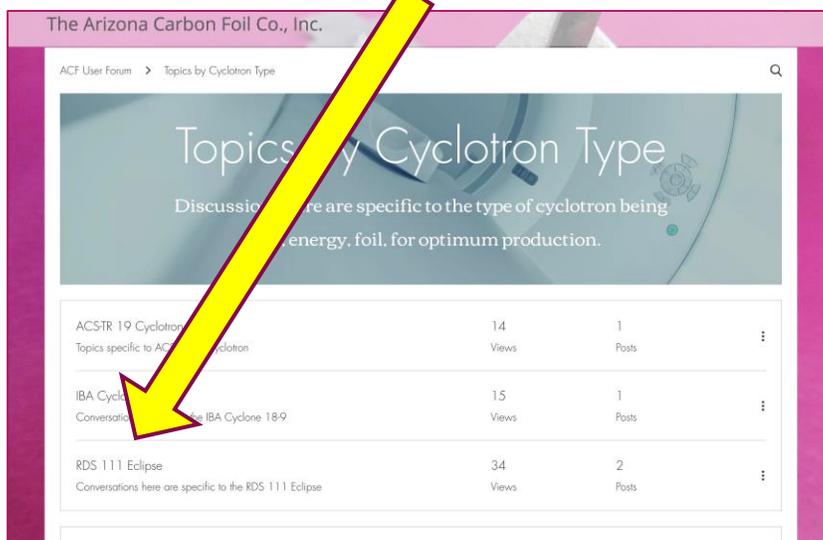
Reply

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# RDS-111 Question and Reply

- ▶ The third cyclotron category is the **RDS-111 Eclipse**.



- ▶ Considering the nature of this question, I had the rare opportunity to actually suggest this user may want to choose a holder that would be more apt to *have* thermal expansion.

ure | <https://www.acf-metals.com/forum/topics-by-cyclotron-type/rds111-and-pcg-1000>



tim.irizarri

## RDS111 and PCG-1000

20 views 1 comment Edited: Sep 7

Hi,

I have a RDS111, medical cyclotron, which accelerates H<sup>-</sup> at an energy ~11MeV, (that I use to produce N-13, C-11 O-15, F-18) using the PCG-1000 foils.

In the holder, the foil can get a little sag, or bend, so during the runs I end up having to tune the extraction position, I wonder can anything can be done about that considering the fragile nature of the foil, and how thin it is.

I'd appreciate input, has anyone else experience this, how do you manage it?

Cheers.



0 ❤️



constance ★

a day ago ⋮

Input I have is measurements for cutting the foil for a Siemens RDS111/Eclipse. It is .5 x .45 inches for a perfect fit. I wonder what your holder is made out of, graphite? Have to consider the thermal expansion, in this case if you actually need the foil to get tighter, the mount chosen could need to expand gently, as things warm up.

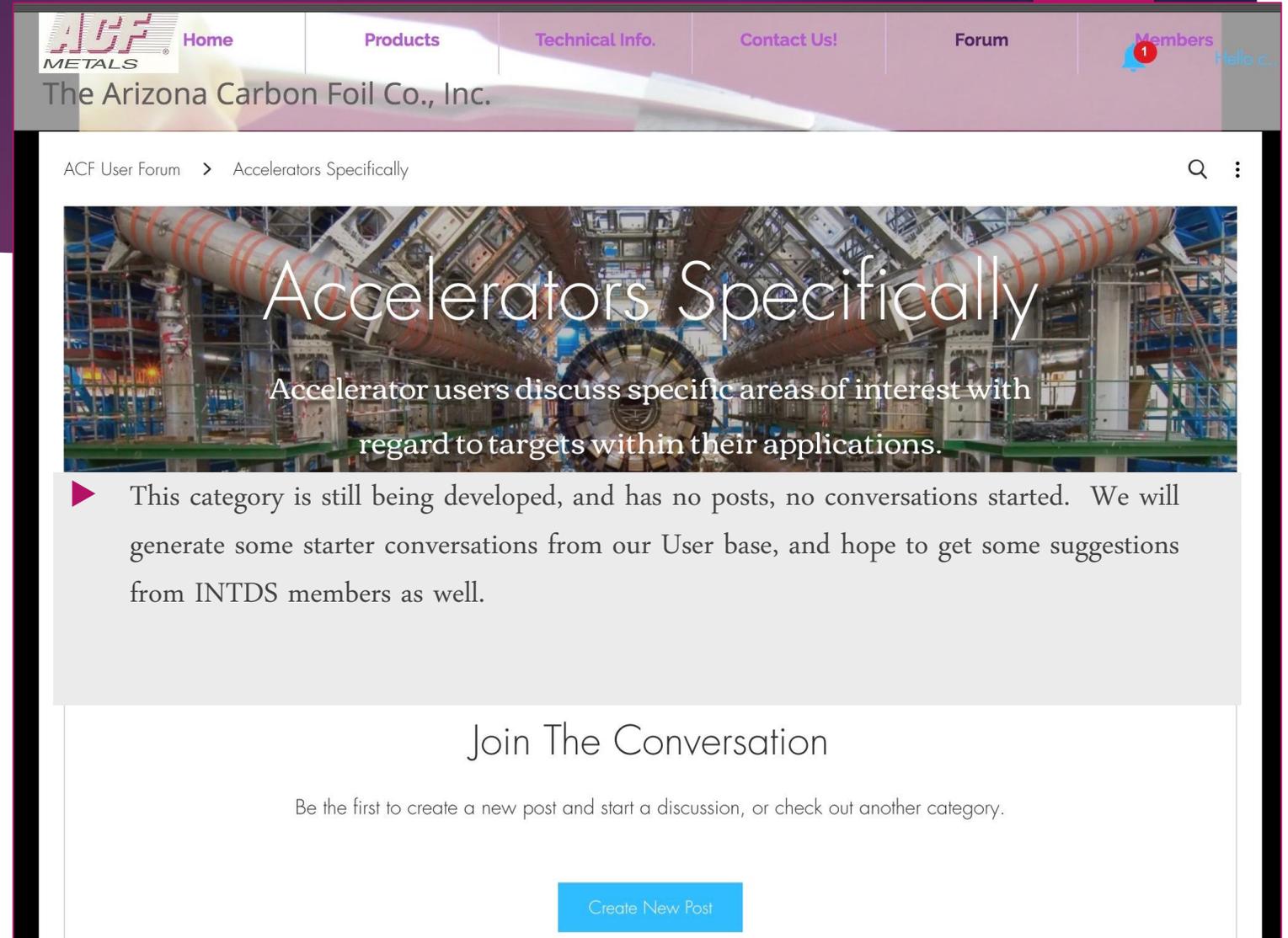
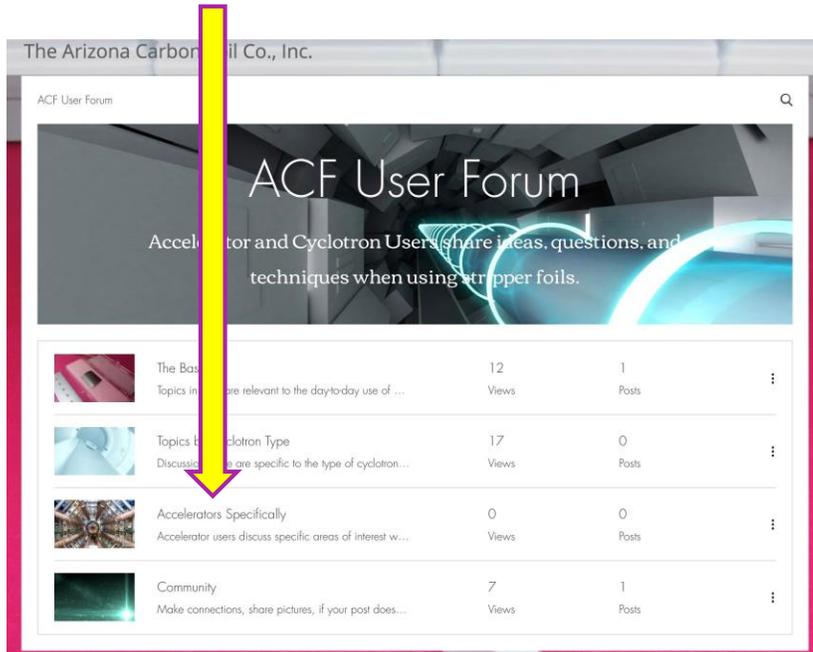
Reply

0 ❤️

- ▶ We want the Forum to be a place where users can share information with relative freedom, be creative, and helpful at the same time.

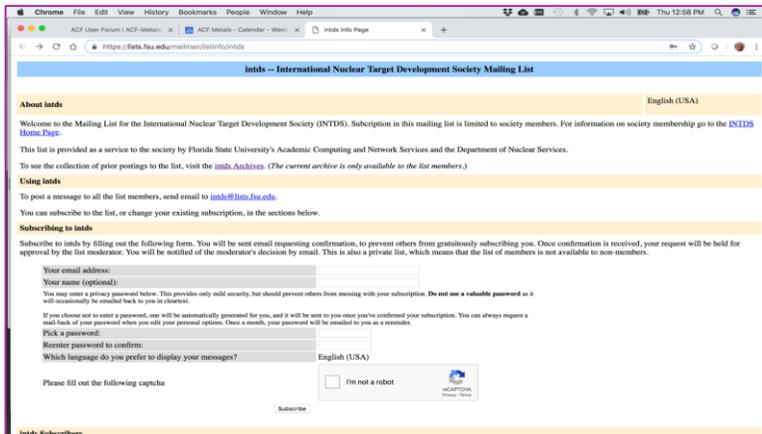
# Accelerators Specifically

- ▶ Now, we can return to the Hub, and select the next category, which is for other types of Accelerators.

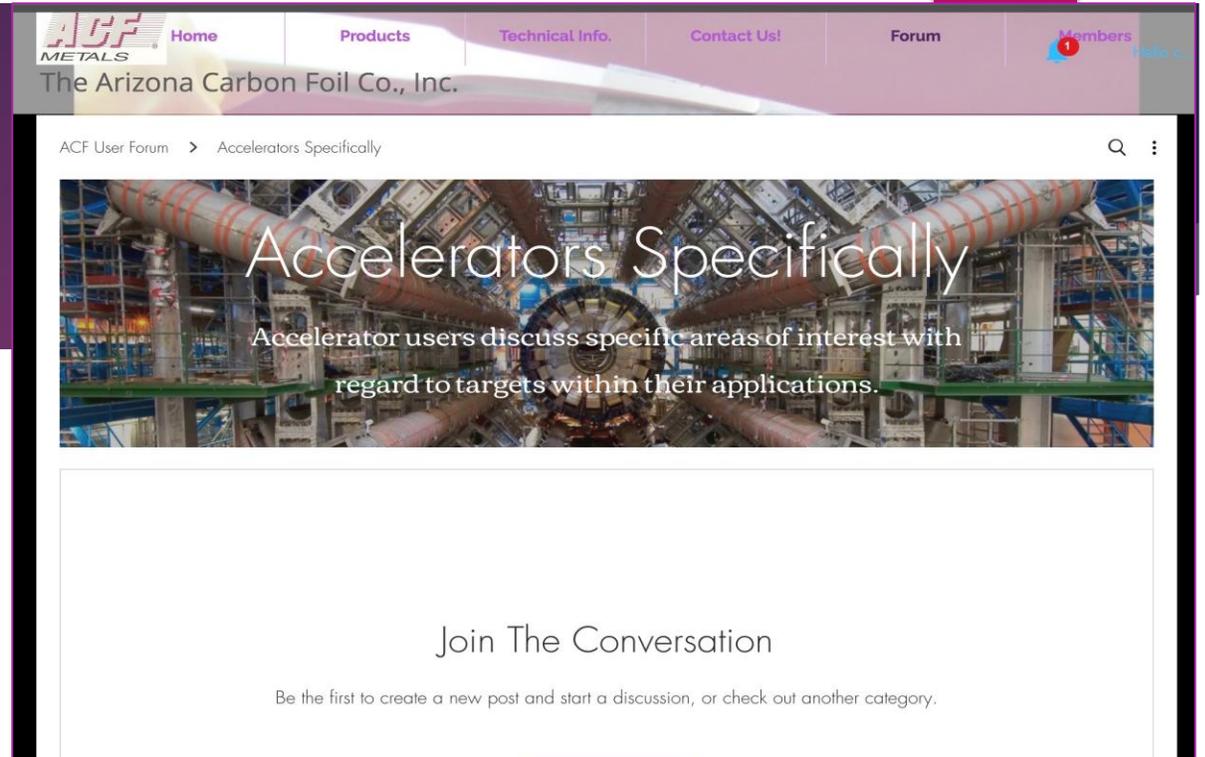


# INTDS and the Forum

- ▶ The INTDS is made up of target makers, and we all want the researchers using our targets to succeed. You, as a group have the <https://Lists.fsu.edu>, sponsored by the Florida State University network services, and the Dept. of Nuclear services as a resource. You can ask questions, share techniques, post job opportunities and much more. This Forum, is providing a similar resource for your Users.



- ▶ Many facilities have multiple accelerators/cyclotrons, so they are using different kinds of targets from various providers. Within the Accelerator category here on the Forum, is an excellent place for the INTDS to be represented as a sister source. Creating a place for the target users to connect with other users *and* the actual target makers.



# Community

- ▶ The final category in the hub of the Forum, is Community.
- ▶ This is a very important category, where Members can make connections, share pictures of their posters from conferences, make announcements, recommend conferences, all in line with the overall purpose of helping this community to be connected, share and grow.



The Arizona Carbon Foil Co., Inc.

ACF User Forum

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# Fostering Community

- ▶ How can I help foster a community of target and stripper foil users to communicate?
- ▶ We all foster this when we appreciate the benefits of having other like minded individuals from all over the world to consult with.
- ▶ You can encourage users from your facilities to check into the Forum, see if it would be useful to them.
- ▶ Grow **your** community, use the INTDS Lists as the valuable resource it is, and provide support for the new target makers.

ACF User Forum > Community > INTDS 2018



constance ★

Sep 18



## INTDS 2018

8 views 0 comments

The ACF User Forum will be officially launched and presented at the International Nuclear Target Development Society (INTDS) Conference 2018 will be hosted and organized by the Facility for Rare Isotope Beams (FRIB). The conference will take place on 8 - 12 October 2018 on the campus of Michigan State University in East Lansing, Michigan, USA.

[Facility for Rare Isoptope Beams](#) - 640 South Shaw Lane, East Lansing, MI 48824, USA



0 ❤️

# Questions?

- ▶ This concludes my talk, I am happy to hear any discussion on ways to further encourage future target makers and users to collaborate, also any suggestions for possible topics we could include in the Forum to maximize its effectiveness.

The Arizona Carbon Foil Co., Inc.

ACF User Forum

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