

[03:55] TED joined #go.
[03:55] <Casimir> hello Guest
[03:55] <Alain> Welcome again TED
[03:55] Nick change: gemma_away -> gemma
[03:55] <Sara> Hello guest, Ted
[03:55] <Casimir> Welcome Ted
[03:56] <Barbra> So, where is everyone tonight? Mostly USA?
[03:56] Kayahan joined #go.
[03:56] Frank joined #go.
[03:56] <Sara> Hi Frank
[03:56] <MoDo> Yes, Barbra, AZ
[03:56] <Alain> hi Kayahan, Frank
[03:56] <Kayahan> hi ppl..
[03:56] <Barbra> Hi Kayahan
[03:56] <Casimir> Hi Frank
[03:57] <MoDo> Hello, John-Boy :-)
[03:57] <Casimir> Hi Kayahan
[03:57] <Frank> Hi all
[03:57] <Kayahan> hi alain, barbra..
[03:57] <Kayahan> hi casimir..
[03:58] Riniel joined #go.
[03:58] <Alain> Hi Riniel
[03:58] <Barbra> Hi Riniel!
[03:58] <Casimir> hi Riniel!
[03:58] <Riniel> yayi'm in!!
[03:58] <MoDo> Hey, Riniel, how's school?
[03:59] <Riniel> the loading took forever here (i'm running on 48kbs)
[03:59] <Riniel> it's cool
[03:59] <Casimir> thats alright
[03:59] <MoDo> Great
[03:59] <Riniel> there's lots to read up though....
[04:00] <Alain> TED, is everything working for you?
[04:01] <Annie> Hi Ted, welcome once again., we have a nice crowd eagerly waiting for you
[04:02] <hehheh> humm
[04:02] <Annie> Shall we do the intro's and then start
[04:02] <Casimir> yes
[04:02] <Barbra> ok
[04:02] <Frank> Yes welcome Ted and thanks for coming
[04:02] <Alain> Let's wait for Ted
[04:02] <Annie> did he go somewhere
[04:02] Edward joined #go.
[04:03] <Alain> Welcome Edward
[04:03] <Barbra> hi edward
[04:03] <Annie> Hi Edward
[04:03] <Casimir> Hi Edward
[04:03] <Edward> Hi everybody!
[04:03] <Annie> how is it going there..
[04:04] <Edward> Good. I am in BKK and it is a rare quiet day!
[04:04] <Barbra> what's BKK?
[04:04] <hehheh> I think it's their New Year in Bangkok now
[04:04] <Edward> Bangkok...
[04:04] <Annie> Bankok
[04:04] <Casimir> greetings from Helsinki
[04:04] <hehheh> They are having a weeklong break!
[04:04] <Barbra> yes, and San Francisco!
[04:04] <Riniel> yeah
[04:05] <Annie> its easter in Australia

[04:05] <Frank> and in France
[04:05] <Riniel> i'm bored staying in my room in BKK!!
[04:05] <hehheh> well, hope you are enjoying AIGS
[04:05] <Kayahan> greetings from istanbul..
[04:05] <Riniel> yeah
[04:05] <Alain> TED, are you still there?
[04:05] <Kayahan> and happy birthday frank..
[04:05] <Frank> don't be bored Riniel...be studying :)
[04:05] <Edward> Why do you stay inside the room????
[04:05] <Annie> Frank, HAPPY birthday
[04:05] <Riniel> happy birthday frank!!
[04:06] <hehheh> ah, we have a birthday boy here today!
[04:06] <MoDo> Happy B-day, Frank!!!
[04:06] <Crystal> happy birthday Frank!
[04:06] <Riniel> hehe....yes frank....i'll be a good girl and study during this weekend...
[04:06] <hehheh> Happy birthday!
[04:06] <Frank> Thanks all...This is a nice start to a birthday...a chat with Ted
[04:06] <Annie> anyone bake a cake for Frank today and a chat with Ted..
[04:06] <hehheh> is Mr Themelis experiencing technical problems?
[04:06] <MoDo> No, but I'll eat ice cream for it!
[04:07] <hehheh> Reminding me of ice cream... I'll go get some now
[04:07] <Frank> thanks modo I knew I could count on you :)
[04:07] <Crystal> I second that MoDo
[04:07] Gene joined #go.
[04:07] <Alain> Welcome Gene
[04:07] <Casimir> Welcome Gene
[04:07] <Riniel> hello
[04:07] <MoDo> Any time, Frank :-D
[04:07] <Frank> Hi Gene
[04:07] <Annie> Everyone can get a dish of icecream
[04:07] <Gene> hello?
[04:07] <Sara> I baked a cake today. I made it into a bunny
[04:07] <Sara> Hi Gene
[04:07] <Annie> Hello Gene.. where are you from ?
[04:08] Gene left irc: Gene
[04:08] <Riniel> yay! i can have icecream for breakfast!!
[04:08] <MoDo> Alain...take a mirror and see if Ted is okay.
[04:08] <Crystal> LOL
[04:08] <Sara> or PM him.
[04:08] <Casimir> The last chat with V.Pardieu was wonderful
[04:09] Gene joined #go.
[04:09] <MoDo> Sorry, Gene, someone just waxed the floor!
[04:09] <Riniel> welcome back gene!
[04:09] Gene left irc: Gene
[04:09] <Annie> Welcome back Geene
[04:09] <Annie> ohh
[04:09] <Crystal> Woops!
[04:09] <Riniel> ...
[04:09] <Frank> lol...he doesn't seem impressed
[04:10] <MoDo> Probably having trouble
[04:10] <hehheh> Riniel, I'll be expecting to learn basic thai from you:)
[04:10] Gene joined #go.
[04:10] <Crystal> Yeah, between the banana peel and the wax
[04:10] <Frank> I know I've had some horrid experiences trying to stay in chat
[04:10] <Gene> hello?

[04:10] <Riniel>haha hehheh...my thai is ew
[04:10] <MoDo> Just keep coming back, Gene!
[04:10] <Annie> hello
[04:10] <TED> Alain, can you read my messages?
[04:10] <Annie> hi Ted
[04:10] <Gene> Is Ted here?
[04:11] <Riniel> hello
[04:11] <Barbra> Greetings Ted!
[04:11] <Alain> Welcome Ted
[04:11] <Crystal> Hi Ted
[04:11] <TED> yes, i am here
[04:11] <MoDo> There you are! Welcome TED!
[04:11] <Casimir> Welcome Ted!
[04:11] <TED> hi everyone..
[04:11] <Annie> Ted, we can read your message
[04:11] <Kayahan> hello ted..
[04:11] <hehheh> hi Ted
[04:11] <Edward> Ted, I have a Q for you: I am working on a way to bring an ecological mining approach to Burma. I know it is not going to be easy, but one has to start somewhere-2026 What would you say is the ecologically most difficult part of mining in Burma and where would you begin?
[04:11] <TED> great..
[04:12] <Casimir> How was Your stay in Italy?
[04:12] <Casimir> when will You be in Europe again?
[04:13] <Gene> Ted, I am a gem cutter in the US.. small operation, just me. My new interest is in heating. I picked up a small oven that can up to about 1300 C and wonder what I can do with it.
[04:13] <TED> It is difficult. Seven months ago, the Burmese gov't stop all mining and forced the miners to rehabilitate their mining activities since the ecologicla destruction is quite evident.
[04:13] <Alain> Holdon people, let's not randomly ask questions to Ted
[04:13] <Annie> his is a reminder for everyone
[04:13] <Annie> if you have a question
[04:13] <Annie> please
[04:13] <Annie> type 'question' first
[04:14] <Annie> then Ted will answer your questions in turn
[04:14] <Annie> and finish your answer with a 'ok'
[04:14] <Alain> First things first, the indroductions
[04:14] <Annie> is that ok.
[04:14] <Gene> sure
[04:14] <Sara> Alain typically let's each individual know when it's their turn to send their question, as well.
[04:14] <Frank> Yes Annie
[04:14] <Annie> Ted, we were going to do the intro for you
[04:14] <Riniel> OK
[04:14] <Annie> but you were experiencing some difficulties there
[04:14] <Alain> Welcome everyone and a special thanks to Ted
[04:15] <Annie> so we will start in a nice fashion
[04:15] <TED> Answer for Gene: it is like buying a car and you don't know how to drive. You can do couple things with your 1300oC furnace.. more.
[04:15] <Annie> Welcome and thank youfor taking the time to visit us... I am from Australia
[04:15] <Sara> Also, if Ted has a long answer he can break it up by typing more on the first portion, and 'ok" when he's finished.
[04:16] <TED> For Gene: For instance you can treat rubies with a mixture lead, bismhuth and tantalum (plus other goodies0..ok..

[04:16] <Alain> People who stay on topic can type "follow up" and they will get preference over a new question

[04:16] <Annie> if anyone wants an elaborated version, please type 'follow up' after your answers

[04:17] <Edward> follow up

[04:17] <Alain> Go ahead Edward

[04:17] <hehheh> follow up: what is the effect of Pb Bi and Ta?

[04:17] <hehheh> sorry

[04:17] <TED> the effect ranges from minor to dramatic.. !ok

[04:18] <Edward> Now, I know the gov in Burma is difficult, but is there any way u can see to start with?

[04:18] <TED> it is impossible.. they have their own agents and their mentality..ok

[04:18] <Alain> question

[04:18] <Gene> question: Ted, is there any "cook book" published about heating? Seems like everything I see is very vague.

[04:20] <TED> The only books I know are the ones i wrote; The heat-treatment of ruby-sapphire (1992), Be-treated ruby-sapphire (2003) and Flux-Enhanced ruby-sapphire (2004). ok

[04:20] <Alain> Good one

[04:20] <MoDo> Question?

[04:20] <Alain> Yes MoDo

[04:20] <Frank> question?

[04:20] <MoDo> TED, you have some great photomicrographs in your books. Have you thought of publishing more as a help to recognize the treatments?

[04:21] <Casimir> Question?

[04:21] <TED> The photos are samples only.. When you see 100-150 every morning you will realize there is something better than the ones you have.. ok

[04:22] <Alain> Frank, you had a question

[04:22] <Frank> How do you decide which type of treatment to give any particular parcel of rough? Is it all down to experience or does locality play a larger role

[04:22] <TED> Yes, I plan to publish these and many more photos.. ok

[04:22] <Annie> Casimir you are next

[04:22] <Casimir> Is it possible to join Your adventures for ex. to Burma?

[04:23] <hehheh> Question

[04:24] <TED> When a gem parcel arrives in my lab, i have master reference set of similar looking stones and i can evaluate quickly.. but I must perform the process and compare the specimens before/after before adjusting my heating parameters for the next heating run..o

[04:24] <Frank> so many stones are heated more than once?

[04:25] <TED> Question for Casimir; No foreign is allowed to go to Hpakant, Mogok and Merqui archipelago for any reason.. ok

[04:25] <Annie> Heh heh - you are next with your question

[04:26] <hehheh> Ted, can you please cover more about the Be-treatment of Blue sapphires?

[04:26] <hehheh> And as well as B-Mg-Co+Be treatment of sapphires

[04:27] <TED> heating the stones is a series of processes with known heating parameters which are plotted in a x-y chart; x=temp, y=oxygen fugacity. A third parameter is the additive mixtures incorporated in the process. ok

[04:27] <Alain> follow up

[04:27] <TED> This is the method I applied to my heating runs for 21 years..ok

[04:28] <Alain> Ted, does treatment with mg and Co need higher temperatures due to higher mass of the atoms?

[04:29] <Frank> question

[04:29] <Gene> question

[04:30] <TED> There are two major issues: diffusivity rate of the guest (mg, co, etc.) into the corundum at a given stabilized temperature. High temperature is a function of the atmosphere conditions during the heat-up, soaking and cool-down process. Hi-temp is not always the best.. ok

[04:30] <Alain> Frank, go ahead

[04:30] <Frank> Vincent mentions on his web site long duration high temperature firings. What is the longest durations you have experimented with and were the results worth the extra firing time?

[04:31] <Alain> (Vincent is Vincent Pardieu)

[04:32] <TED> Long and high temp accelerates the movement of atoms.. but the hi temp affects seriously the supported ceramics (Crucible, etc.). Anyway what do you mean hi-temp?

[04:32] <hehheh> 1800 deg C? near corundum melting pt?

[04:33] <TED> I have done a heating process for 96 hours at 1750oc..!

[04:33] <Frank> well as I understand it you can use lower temps if you are going for longer duration...say 1700 for longer = 1900 for shorter

[04:33] <Frank> even 1500

[04:34] <TED> As you know, the melting point of corundum is 2025oC IF CHEMICALLY PURE. rubies-sapphires have lower melting point, because they are imperfect crystals, meaning they have impurities (Fe, Ti) which often provide the color we all see.. ok

[04:34] <Frank> The processes I was reading about were allegedly done over three weeks

[04:35] <Guest59> Sue (Guest) What were your results, Ted, after 96hours at 1750?

[04:35] <>Nick change: Guest59 -> Sue

[04:36] <TED> it could be for any period of time, as long as the heating elements last. The heating time is a function of a: size of the crystal, diffusion rate, atmosphere conditions and operating STABILIZED TEMPERATURE.. ok

[04:36] <hehheh> question

[04:36] <Annie> gene is next

[04:37] <Alain> Sue's question is not answered yet

[04:37] <Gene> Ted, I was wondering if you have any information about heating stones other than sapphire and ruby. Specifically Zircon or tourmaline.

[04:37] <hehheh> :)

[04:37] <TED> the results were mixed, because I purposely used different size crystals on the similar (not same) type of corundums.. ok

[04:38] <Sue> Thank you

[04:38] <Gene> so far I have been able to turn brown zircon from Africa into white zircon at about 900 to 1000 F.

[04:38] <Annie> Heh heh, was your question related to Gene's :-)

[04:38] <TED> In the past i have done some treatments on emeralds using a high pressure, low -temp piston.. ok

[04:39] <hehheh> Ted,

[04:39] <Alain> Ted, let us know if the questions come too fast or if you want to go deeper on a subject (or if you need a coffee break)

[04:39] <Annie> Heh Heh isn't ext

[04:39] <TED> You can heat Cambodian zircons with sugar (what a mess)..ok

[04:39] <TED> at 600oC to 900oC.. ok

[04:39] <hehheh> Why are the thais lead-glass filling the Madagascan rubies when fracture healing with Borax has been done on Mong Hsu rubies before?

[04:40] <Casimir> Question

[04:40] <TED> It all depends on you.. (i am having coffee as I type)..ok

[04:40] <Riniel> follow up : what do u get if u mix the zircon with sugar?

[04:41] <TED> No me, the Thais stationing across the Thai-Cambodian border, near the Casino at the Combodian side.. ok

[04:42] <TED> high carbon and lots of smoke..ok

[04:42] <Alain> question

[04:43] <Casimir> What kind of results have You acchieved on emeralds?

[04:43] <TED> again, all it all depends on the filler and the size of fractures.. ok

[04:44] <Alain> Ted, what effects does Mg and/or Co have on corundum, colorwise and are there any detection methods one can preform with standard gemological equipment

[04:44] <Casimir> question

[04:46] <TED> the mg occurs naturally on some types of Songea corundums. the mg can produce yellow.. ok

[04:46] <Casimir> Is it possible to treat stones in low temperatures / of for short times, so that the treatment is not detectable by a gemmological microscope.

[04:46] <Casimir> ?

[04:48] <TED> The moment you heat-treat a stone above the altering/melting point of its guest inclusions, you can detected if you know how the inclusion should be unaltered (untreated).. ok

[04:48] <Casimir> question

[04:48] <Alain> Go ahead Casimir

[04:48] <Casimir> Do You have expierience on heating sapphires from Hainan-Island (China)?

[04:49] <hehheh> questions

[04:49] <TED> yes, they called them "midnight blues"

[04:49] <Frank> question

[04:49] <Alain> Go ahead hehheh

[04:50] <hehheh> Ted, what is the effect of burning Chanthaburi and Shandong Sapphires?

[04:50] <hehheh> And what conditions are recommended for treating them? Be them?

[04:51] <TED> depending the heating method.. usually you clear the silk, thus improving the clarity. As a make-up process, the be-process is used to produce, yellow-green, yellowish and simialr colors.. ok

[04:51] <Alain> Frank, you are next

[04:51] <Frank> Can you explain why corundums which experience a "natural" heat treatment in for example metamorphic deposits don't show the same detectable alterations as lab heated stones?

[04:51] <Casimir> question

[04:55] <TED> the genesis of rubies, for example, in the metamorphosed marbles from Mogok is a very slow process involving pneumatolic igneous reactions with schists and mables influenced by fluids causing contact metasomatism. OK

[04:55] <Alain> Casimir, go ahead

[04:55] <Casimir> Do You treat diamonds?

[04:55] <Alain> question

[04:55] <TED> I never treated diamonds..

[04:56] <Alain> Ted, what are the plusses of Mg over Be, if any?

[04:56] <Casimir> question

[04:57] <TED> not much difference, they both occur in nature, though beryllium much rarely..ok

[04:58] <Alain> Casimir

[04:58] <Casimir> Are there corundum heat-treatments that are not stable?

[04:59] <Alain> follow up

[04:59] <TED> some mixtures of lead may not be stable during standard jewelry repairs.. ok

[04:59] <Frank> question

[05:00] <Alain> Ted, you mentioned (at another time) that Songea sapphires have a natural Mg skin, should I take that literally .. as a sort of natural urface diffusion?

[05:00] <TED> some types of yellow sapphires are also not stable.. Ok

[05:00] <Sue> question

[05:00] <gemma> question

[05:01] <Annie> Frank - you are next in line

[05:01] <Frank> Is it necessary to provide a kilo or so of rough or would you be willing to do sample runs on smaller amounts if the client wanted to see what results could be obtained?

[05:05] <hehheh> question

[05:05] <Annie> is everything ok, Ted

[05:06] <TED> sorry i need to retype my reply.. The songea sapphires coming from at least two different deposits a) alluvial and b) dyke, fully coated with mg. If you see fig. 44 in my be-book you will see the effect of treatment i did in 1994 (without) beryllium) and in 2003 (with beryllium). ok

[05:08] <Alain> You can take all the time you need Ted

[05:08] <TED> when conducting experiments trying to detemine the best treatment parameters the x-y plotting is necessary (in my lab). I designed a 1800oC furnaces where i can heat 8 different types of corundums of different types under the exact same conditions and then compare the resutls.. ok

[05:09] <Alain> Sue, you had a question for Ted?

[05:09] <Annie> if anyone does not have the book, i can scan and send to who ever is interested

[05:09] <hehheh> question

[05:10] <Alain> Uhm, just buy the book

[05:10] <Annie> fig 44

[05:10] <gemma> yes, they are not very expensive and lucious

[05:10] <Casimir> question

[05:10] <Annie> question

[05:10] <Alain> Sue?

[05:10] <Sara> Perhaps she's typing.

[05:11] <TED> yeah, fig. 44 page 21. you will see the garnet-lloking colors produced in 1994 and the orange red with berylliumm in 2003. On the same type of songea corundums.!OK

[05:11] <Alain> gemma, continue please

[05:11] <gemma> If some mixtures of lead are unstable and can be altered during repair, does that mean it can come off during wear or handling? Is the lead in treated gems harmful to the dealer or wearer at any time?

[05:11] <Sue> Thank you, If a cut stone, say lead/glass filled is damaged during jewellery repair, can it be repaired, is it economically viable and if so what would be the procedure

[05:12] <Alain> heh

[05:12] <Alain> Sorry about that

[05:12] <Sara> Told ya

[05:12] <gemma> ;)

[05:13] <Barbra> question

[05:14] <Sue> Also, if it is the rough Songea corundum that has the Mg coating, how much of that would still be present after cutting

[05:17] <TED> The Pb mixture is residing a minute surface-reaching fracture which can be seen in reflected light due to difference in luster.. Washing dishes while wearing a Pb-treated ruby will not remove/alter the color. The alteration may take place if you place the Pb-treated stone into a pickling solution during jewelry repair, (i.e. sizing). Take a look on fig. 99, 100, 101 and read page 43 of my Flu-Enhanced rubies-sapphires book. it explains all the stability test i performed

[05:19] <Alain> Would repair be possible at acceptable costs?

[05:24] <TED> Pb-rubies damaged by various means may be re-treated with Pb, but you will lose some weight.. OK

[05:25] <Alain> hehheh, you were next in line

[05:25] <gemma> ?

[05:25] <Casimir> Is it possible to produce inclusions to corundum, that resembles those in nature, others than "silk"?

[05:25] <TED> for minimal cost.. but no treater will perform the process for a single stone.. ok

[05:25] <Sara> Gemma's question wasn't answered yet

[05:25] <hehheh> question

[05:26] <hehheh> My turn?

[05:26] <Casimir> i'll stand in line :)

[05:26] <hehheh> I was on the phone sorry

[05:26] <Alain> Ted, I believe gemma had a question on health issues with Pb

[05:27] <gemma> yes

[05:27] <hehheh> Some time ago, you presented your results on LIBS on Chrysoberyl and detected no Be at IGC in Wuhan China. Why?

[05:27] <TED> yes, i have a super-dupper piston that I can introduce alkakine fluid mixtures that they look like liquid inclusions. this process is a separate post heating process.. It is actually a hydrothermal vessel at low temp, high pressure.. ok

[05:29] <Casimir> question

[05:30] <TED> as for as i know, health issues on Pb-stones for the consumer and dealer do not exist. However, the treater is exposed to great amount of poisonous fumes during the Pb-treatment. Some treaters in Chanthaburio wear chemical protected suite to avoid Pb poisoning... k

[05:30] <Alain> Annie, I believe you had a question

[05:31] <Alain> Oh wait, hehheh asked his question already

[05:31] <Annie> am i next

[05:31] <Alain> Let Ted answer hehheh first

[05:31] <hehheh> sorry about that

[05:32] <Alain> That's ok

[05:36] <Frank> question

[05:37] <TED> On may 2004, i performed a series of tests on Be-and non-Be treated stones treated in my lab using two different types of LIBS system in the UK. The tolerance of error was 15%. On Jan. 2005 The same stones were submitted to ocean Optics in Fla and tested using their own LIBS (same used by SSEF). The tollerance of error was again 15%. Some labs did not like my work (conflict of interest).. But I have the facts from the real manufacturer of LIBS system.. ok

[05:37] <Alain> Annie, go ahead

[05:38] <Annie> ok great.. i have a very difficult question - hope you don't mind, Ted

[05:38] <Annie> here goes.

[05:39] <TED> Which brings to my conclusions that LIBS is a strongly diagnostic test, not conclusive. But it can be improved.. time given..ok

[05:39] <Annie> oh.. On the last page underneath your references there is a photo with you and Dr. Alan Collins at 7th annual conference; examining a sapphire with a microscope. In the background behind you is that gentleman Allan Hodginkson ?

[05:39] <Alain> heh

[05:40] <TED> yes, Alan was there and at that conference it was the first time that real gemologists examined real be-treated stones treated in my lab.. that was in may 2003.. ok

[05:40] <Alain> Casimir, I believe you are next with a question

[05:40] <Annie> ok, thanks Ted

[05:41] <Casimir> Can You please tell us somthing about how You design Your furnaces?

[05:41] <hehheh> !

[05:41] <hehheh> How much does one cost?

[05:42] <Annie> I think Barbra was after me !

[05:42] <Barbra> My question was answered ahead in the Pb reply. So you can carry on to the next question

[05:42] <Annie> ok, just not leaving anybody behind.. thats fine then, thank you

[05:43] <TED> i designed my furnace to accomodate different types of stones under the exact heating parameters using vertical muffle, bottom-top loading capability to accomodate any gas or gas mixture at stabilized temp. 1800oC.. ok

[05:43] <Alain> Frank, you had a birthday question?

[05:43] <Frank> Do you have trouble with contamination when you move from say a be firing to a normal firing?

[05:44] <TED> the cost is about US\$30,000.. ok

[05:44] <Annie> I think we will start wrapping up after Birthday boy's question ?

[05:44] <Frank> sorry Be

[05:45] <Alain> question

[05:45] <Casimir> question

[05:45] <Sue> Question?

[05:46] <TED> no contamination problems with my furnace. I simply use different muffle, so the stones are always in a "clean, contamination-free" environment. the process is more expensive, but the results are true.. ok

[05:46] <Alain> Casimir, you can go ahead

[05:46] <Casimir> Can You produce Colour-Change sapphires?

[05:47] <TED> Easily.. But you must define the "color-change" term. Do you mean "color-change shift?" ok

[05:47] <gemma> :)

[05:47] <Alain> Please clarify Casimir

[05:47] <Casimir> what is color-change shift?

[05:47] <Casimir> I mean

[05:48] <Casimir> that the colour changes when viewed in different light conditions

[05:49] <TED> Long answer.. but read page 44 of my "heat-treatment of ruby-sapphire" book. it is all there with 10 real sample processes perfomed in the late 1980's. ok

[05:50] <Alain> Sue, you have a question?

[05:50] <Sue> Can you give us some indication of how Pb filling treatment would affect the price of a stone? Also the question I asked earlier about th Mg coating on rough Songea Corundum, how much is still present after cutting?

[05:51] <Sue> PS Your book 'Hest treatment of Ruby-Sapphire' is currently sold out, is there a reprint planned?

[05:51] <gemma> (thanks for asking that sue, wondered too)

[05:52] <Casimir> question
[05:53] <Casimir> Alains turn..
[05:53] <Sue> Perhaps I should, clarify that, I realise that a badly fractured rough if lead treated would be more saleable, but how would you suggest we value Pb/ glass filled stones in relation to non Pb treated stones, I can't find a reliable price source
[05:53] <Alain> I'll wait
[05:54] <TED> ok.. the price of the Pb-treated rubies (i.e for 1 ct) range from US\$5 to \$20/ct. As a gem treater I buy 10 kilo lot of potential treatable rubies. not all stones appear same (or similar) after the process and the prices vary widely.. ok
[05:54] <Sue> Thank you Ted
[05:54] <Casimir> What kind of future-vision do You have of the treatment-business?
[05:54] <hehheh> why don't you fracture heal them instead?
[05:55] <Alain> If I may at a comment: Ted, someone once gave a guide (coming from you?) Natural = 100%, Flux heated = 50%, Be Treated = 25%, Lead filled = 10% .. is that a valid (coarse) guideline?
[05:56] <TED> It is a very difficult to put the price of a Pb-treated ruby. If it cost me US\$1000 to buy the virgin stones, I put 35% profit and sell it for US\$1,350 for the lot. ok
[05:57] <Frank> question
[05:59] <TED> question 1- the Pb process is not a single process. it is a series of "batch" processes. For example, some rubies react at once, others need a "make-up" process involving other chemicals, including borax, silica, etc. Lastl, the be is introduced. So, you cannot say these rubies are Pb-treated, because other elements are present as shown in the lab reports..
[06:03] <TED> question -2: my vision of the gem treatments is simple an straigh: without treated stones the industry cannot function. My idea was a) to redefine the word "gem" and b) to classify the gemstones into three categories N=natural (untreated, except cutting), T=treated (by any method) and O= other s (synthetic, imitation, etc.). Now i am also considering the term "ashioned gems" on certain types of treated gemstones.. ok
[06:03] <Alain> Frank, go ahead
[06:03] <Frank> how much does the furnace firing and maintenance cost per firing?
[06:03] <Alain> question
[06:04] <TED> for my furnace system about US\$350 per run (average).. ok
[06:05] <TED> sorry for the typo; i meant "fashion gems"
[06:05] <Alain> Ted, I read a post yesterday that miners in Mogok (Kadokta?) are having problems due to water and production is very low due to that, have you heard the same?
[06:06] <Casimir> question
[06:07] <hehheh> question
[06:08] <TED> the kadoke-tat is a natural fracture along the Mogok Marble Arc I call. they are always have problems with water sicne I visited the mines (there are 21 plots).. all mining concerns mining are kadoke-tat lost money; however, they are still in operation, serving a cover for other reasons.. ok
[06:08] <Casimir> Is it possible to remove glass-filling from a corundum?
[06:09] <TED> what do mean glsss-fillings? Pb-based flux? borax-based flux? additives with Silica? what? ok
[06:10] <Alain> Did you mean the lead-glass procedure Casimir?
[06:10] <Casimir> yes
[06:10] <Casimir> lead-glass

[06:13] <TED> teh Pb reacts rapidly with HF. So, if you apply a drop with a toothpick on the surface-reaching fracture, then reaction will take place and SOME Hf would be 'removed' . take a look fig.45 of my flux book, the diagram explains how the filler is residing into the fracture. Thus, you will never be able to remove completely Pb from a Pb-treated corundum..! ok

[06:13] <Alain> But don't try that at home

[06:14] <Alain> hehheh, you have a question?

[06:14] <hehheh> yeah

[06:14] <Alain> Ted, will you let us know when you need to go?

[06:14] <hehheh> Ted, where does the nice fierce blue sapphires come from in Mogok?

[06:16] <Casimir> question

[06:17] <Sue> question

[06:17] <hehheh> Is it Turingtau (can't spell)?

[06:18] <TED> Actually, the best blue I have seen comes from Ye-nya-oo area (west of Mogok). But in Mogok, very fine quality blues come from the alkali-feldspar syenite dykes at Thurein-taung; others are found at the basin of Yadanar-kaday-kadar; yet many fine blues are recovered from the alluvial gravels.. ok

[06:18] <Casimir> Have you planned to hold presentations/seminars in Europe in the near future?

[06:20] <TED> not sure, i am working now the last state of my book Gems & Mines of Mogok... I should never have started this project.. It is so difficult, but so far the info i am giving are solid and 100% verified. that will cause some commotion in the gem community because I do not agree with the published literature.. ok

[06:20] <Alain> Sue, go ahead

[06:21] <Alain> follow up

[06:21] <Sue> I heard there were political trade restrictions with Burma is that true?

[06:21] <TED> You mean between the US trade embargo? ok

[06:22] <Sue> Yes, is it still in force? What countries are affected?

[06:23] <Casimir> question

[06:24] <TED> the US trade embargo is now affecting the construction and other industries in Burma. however, the gem business are carried on as usual... ok

[06:24] <Alain> Ted, do you have an estimate when the new book will be out? And do you have a chapter of the manuscript online for us to take a sneak-preview?

[06:26] <gemma> (and sue's question about reprinting the treatment book . . .)

[06:26] <TED> the book was sent for editing last month. The book will be available in few months.. The genesis of Mogok peridot is in big debate, but i will present the facts and let the readers make up their mind.. ok

[06:26] <Casimir> How much of your time do you operate in the lab? Are you also doing some fieldwork "outside" of writing your book?

[06:28] <Sue> It is 5.30am in the UK and I must go for some sleep, so I am regrettably signing off now. thank you so much all of you I have enjoyed this chat immensely

[06:28] <Alain> Goodnight Sue, thanks for attending

[06:29] <Sue> Goodnight all. Hope to chat with you all again soon

[06:29] <TED> As soon as the Mogok book is out, I will publish the Treatments of ruby-sapphire, that include ALL known treatments performed to corundums. i have a 140 GB disk drive with 20,000 new images of nearly all corundums I have treated in the past 21 years. Not a easy task, and no reference will be given, simply because I performed all treatments discussed in this book... ok

[06:29] <Barbra> Goodnight
[06:29] <Annie> Sue, thank you for coming, have a good night
[06:29] <TED> goodnight Sue..
[06:30] <Alain> Will you be putting the images on a series of cd's?
[06:30] <TED> i am not sure.. there is great theft on the intellectual property going on.. ok
[06:31] <Alain> True
[06:31] <Casimir> question
[06:31] <Alain> Go ahead Casimir
[06:31] <Casimir> do You treat jade?
[06:31] <TED> i operate the lab for 21 years, 11 in Bangkok. no, i have not done any jade treatments.. ok
[06:32] <Casimir> are You involved in mining?
[06:33] <TED> I like the concept, but no, it is great risk involved if you know that rubies-sapphires are below your feet.. ok
[06:33] <Alain> Ted, for an enthusiastic gemologist with household equipment, could they do some fun heat treatments in the kitchen .. and if so with which kind of stones?
[06:34] <Frank> question
[06:36] <TED> You can do amethyst, aqua, a test tube a candle flame will do; next step up is the tanzanite using a 600oC oven (some Indians have used microwave); or you can dip you emeralds in oil or resin or oleoresin (not a stable treatment). and so on.. ok
[06:36] <Casimir> follow up (mining): What do You mean "great risk involved if you know that rubies-sapphires are below your feet.."?
[06:37] <gemma> i must go as well. this has been an exciting chat. i have come away with a ore objective opinion of treatments. Thank you for such an energetic chat. :)
[06:37] <Alain> Good night gemma
[06:37] <Barbra> See you gemma
[06:37] <Annie> Thanks for coming Gemma
[06:37] <gemma> night all. thank you ted
[06:38] <Sara> Bye Gemma
[06:38] <Frank> night gemma
[06:38] <TED> i mean, the politics and the relationship between the mine lease holder and the miners is the secret for succesful mining operation. ok
[06:38] <Edward> true!
[06:38] <Frank> What percentage of rough corundum do you find "untreatable" or is it only a matter of finding the right treatment for the right rough?
[06:38] <Sara> A lot of rockhounds look in mine dumps
[06:40] <Casimir> question
[06:40] <Sara> I don't know if it's the same for your location, but if there is any place an owner would allow an individual mine, it would be there
[06:40] <TED> yeah, you can find some nice (but usually small stones) looking on the leftovers . In Burma, these "kanase" may also act as disguises to sell stolen stones, pretending that they found them at the dumps. it is an old trick.. ok
[06:41] <Casimir> Can You tell us somthing about Spinel treatments "these days"?
[06:41] <Sara> they sell stolen cut stones? or rough?
[06:42] <Alain> Not too many questions at once please
[06:42] <Sara> Sorry. I forgot about the system
[06:43] <Alain> It's ok, just a small reminder
[06:45] <TED> I have treated spinel to remove silk without success.. other treaters have not been also sucessful. But you can oil them.. ! ok

[06:46] <Casimir> question
[06:46] <TED> of course, these "kanase" found the stones in the rough.. so they sell what they "found".. !ok
[06:46] <Casimir> Can Be-diffusion treatment produce all kinds of colours?
[06:47] <Casimir> I mean on corundum.
[06:48] <Edward> Question
[06:49] <TED> I believe the beryllium is a "catalyst", causing indirectly coloration when reacted with other elements and/or by creating THCC (Trapped Hole Color Centers).. nobody can predict the exact resultant color. Look fig. 40 of my beryllium book.. ok
[06:49] <Alain> Go ahead Edward
[06:49] <Edward> What is your opinion about the discussion regarding an increased surface brittleness in heat treated sapphire?
[06:50] <Frank> question
[06:51] <TED> The lattice cations at/just below the surface in a corundum have different physical properties including brittleness and hardness. The stone is more than imprefect crystal especially at the areas approaching the surface.. ok
[06:51] <Alain> I believe Frank's question was still open: "What percentage of rough corundum do you find "untreatable" or is it only a matter of finding the right treatment for the right rough?"
[06:55] <Edward> Follow-up: does that mean you agree that treated stones are likely to have a higher surface brittleness?
[06:55] <TED> it is a matter of time.. In the past, certain types of previously "untreatable" corundums are now treatable. For years, I tried to buy rejects from the Thais, nobody will sell me their rejects.. remember there are about 550 treaters in thailand treating 2-3 kilos per run on weekly basis. Make your math and figure out how many kilos are treated adn siphoned to the the market..!ok
[06:56] <Casimir> question
[06:56] <Casimir> Have You ever produced "silk" so that the stone shows a 12-rayed star?
[06:57] <TED> edward: yes, it always has been the case.. Any knowledgable Thai corundum cutter will tell you the difference and tricks he is using in cutting these stones.. ok
[06:59] <TED> the 12-star question refers to twinned crystal habit. In my humble opinion, you cannot produced a 12 -ray star even if you heat-treat the stone extgernally by introducing titanium on the surface/near surface.. ok
[06:59] <Alain> Frank, you had a new question?
[07:00] <Frank> I was going to repeat the last question
[07:00] <Alain> ok
[07:00] <Alain> Ted, it must be almost lunchtime for you
[07:00] <hehheh> question
[07:01] <Alain> yes, hehheh
[07:01] <hehheh> Is mong hsu still producing rubies?
[07:01] <hehheh> Seems that Nanyaseik has been making news
[07:02] <TED> of course, the mining district at Mong-Hsu is greatly expanded and supply 80% of the world's rubies. no Mong0hsu rubies, no rubies in the market..ok
[07:03] <Kayahan> question
[07:03] <Alain> Ted, I have a very important question that is usually reserved for someone who couldn't be here today: what kind of wine do you favor?
[07:04] <hehheh> :)
[07:04] <Casimir> question

[07:05] <TED> the area at Nanyaseik (the correct name is also "Namyá" is closed for several years. I visited Namyá several years ago and I videotaped all mining activities. last week I was in Burma, i asked my Burmese scouts and i was told that the mines are closed. but some illicit mining is taken place. no serious stuff.. ok

[07:05] <Annie> thanks, Kayahan has a question

[07:05] <Kayahan> ted, do you have a "personal" reference for naming corundum as ruby or pink sapphire? a certain color/hue on the border, or any other value to determine? or is it just "instinctive"?

[07:05] <TED> Any red wine with unspoiled cork.. ok

[07:06] <Casimir> Do Your Gem-Lab have "open-door-days", for the public to come to visit, for a guided tour?

[07:06] <Alain> Thanks Ted

[07:08] <hehheh> question

[07:09] <TED> About the ruby-pink sapphire question. From the geological point: Ruby and pink sapphires are found in the metamorphosed marbles (as discussed previously) and in the skarns. Pink sapphire can be found in syenitic rocks. Two completely different geological environment. more

[07:10] <TED> there is a great gray area where the terms are used for different purposes.. take a look on page 25 (distinction between red corundum (ruby) and pink sapphire. (heat-treatment book0.. k=ok

[07:12] <TED> No, I do not have an open-door lab for the public, but i have an open mind and I can accomodate colleagues and friends.ok

[07:12] <Annie> can we at least come and visit you

[07:13] <hehheh> that means we can pay you a visit in Bangkok?

[07:13] <Annie> would the doors be open to us

[07:13] <Kayahan> follow-up: can somebody send me a scan of this page 25 of the heat treatment book?

[07:13] <TED> sure, no problem.. ok

[07:13] <TED> yes, i will. ok

[07:13] <Alain> Only if Ted is ok with that Kayahan

[07:13] <Alain> ah ok

[07:14] <Alain> You hear that Riniel?

[07:14] <Casimir> question

[07:14] <Alain> Go ahead Casimir

[07:14] <Casimir> The "PANDORA'S BOX, who is and why, coming soon" have been on Your web-page for some time. What will it offer?

[07:16] <TED> The truth.. but you can wait, i am still working and waiting.. ok

[07:16] <Casimir> question

[07:16] <Alain> Go on Casimir

[07:16] <Casimir> is alexandrite treat in any stable way?

[07:18] <TED> Not to my knowledge, but neutron irradiation has been performed.. Neutron treatment on corundum is not allowed.. ok

[07:18] <hehheh> followup:

[07:18] <Alain> Yes hehheh

[07:18] <hehheh> why is neutron irradiation on corundum not allowed?

[07:19] <TED> too much Mags, health danger problem.. ok

[07:20] <Casimir> follow up

[07:20] <Casimir> what do You mean with: Your answer

[07:20] <Casimir> not to my knowledge, but still You tell us about the neutron treatment?

[07:20] <TED> the stone retains too much background radiation for many years and poses real health problem (i.e. skin cancer).. ok

[07:21] <Frank> Question

[07:21] <Alain> Go on Frank]

[07:22] <Riniel> hehe...sorry....i heard that....

[07:22] <Frank> If someone did your course and purchased a furnace would a heat treatment business be a viable option or would many years of experience be required

[07:23] <Alain> Big plans Frank?

[07:23] <hehheh> :)

[07:23] <Casimir> question

[07:23] <Frank> just interested...I can see myself in the barn playing alchemist

[07:23] <hehheh> heh heh heh

[07:23] <Annie> we could go on all night, guys, If there are no more questions, we can wrap it up for tonight and thank Ted for a wonderful 3.5 hour session. Well done indeed

[07:24] <Casimir> Can You tell us something about the new treatment-method: "aelectostatic inertial confinement fusion device"

[07:24] <Alain> Let Ted decide Annie

[07:24] <Frank> Yes a marathon session indeed...Thank you very much for sharing your time and knowledge with us Ted

[07:26] <TED> Buying a furnace is not a problem. The problem is how and where to to plug these x-y,z parameters. the course will give you the general guidelines and the furnace will execute your chosen parameters. The trick is to determine the proper parameters. ANother issue to secure continous supply of rough, otherwise you will be confined to constant researach & development trying to establishe the heating parameters for each type of corundums.. ok

[07:28] <Casimir> question

[07:28] <Alain> Yes Casimir

[07:28] <hehheh> question

[07:28] <TED> i am ok.. I am trying to give you honest and down-to-earth answers based on my long lab experience, not wishful thinking.. ok

[07:28] <Casimir> how do You personally avoid health hazards in the lab?

[07:32] <Sara> I have to get some rest; the baby's going to wake up in five hours. Thank you, Ted for sharing your vast knowledge with the group. Have a good night everyone...

[07:32] <Frank> bye Sara

[07:32] <Alain> Good night sara

[07:32] <Casimir> Good night sara

[07:33] <Crystal> I'm afraid I must say good night also. Great chat with excellent questions. Thanks to all.

[07:33] <hehheh> see you

[07:33] <Alain> Bye Crystal

[07:34] <TED> Are they any more juicy questions?

[07:34] <hehheh> question

[07:34] <Frank> lol

[07:34] <Alain> hehheh has one

[07:34] <Riniel> i'm too dumb to have any question...

[07:35] <hehheh> what is your opinion of the portable FTIR from ocean optics? I am thinking of getting one for fun

[07:35] <hehheh> I can't bring the desktop version around

[07:35] <hehheh> :)

[07:35] <hehheh> and

[07:35] <Alain> You mean the usb version hehheh?

[07:35] <hehheh> Can garnets be heat treated?

[07:35] <hehheh> Yeah the USB version

[07:36] <TED> I did not see it.. But you can visit a trade show on analytical equipment and you will be surprise who the technology has changed (and the prices).. ok

[07:36] <Annie> Rinel, you are in good hands and one day you be the person we all will look up to..

[07:36] <Riniel> hopefully.....hehe
[07:36] <hehheh> :)
[07:37] <Casimir> :)
[07:37] <Kayahan> friends, i must leave too, i m already late for work..
it was a pleasure joining you tonight, thank you all.. ted, thank you
very much, i will email you to remind you that page 25 of the heat treat
book.. bye everybody..
[07:37] <Alain> Ted you are on Silom if I understand correct?
[07:37] <Alain> Thanks for comming Kayahan
[07:37] <hehheh> Riniel can bring us to Ted :)
[07:37] <Annie> thanks for coming Kayahan
[07:37] <Frank> bye Kayahan
[07:37] <Riniel> hehee...i might
[07:37] <Kayahan> my pleasure alain..
[07:37] <TED> I have never treated garnets. Correction: yes, I have
treated garnets unknowngly mixed with rubies.. What a mess.. ok
[07:37] <Riniel> i haven't get all the roads memorized yet...
[07:38] <Frank> you've got time Rinial
[07:38] <hehheh> follow up: what happened when they are mixed?
[07:38] <hehheh> Everything cracked up and destroyed?
[07:38] <TED> bye Kayahan,,
[07:38] <Riniel> :)
[07:39] <Alain> Ted, is it a long walk from you to the AIGS office?
[07:39] <TED> The target process was to remove the iron from the rubies.
but the garnets added more iron producing chocolate-color to the rubies
and to the crubible area.. !ok
[07:40] <hehheh> what about burning tsavorites?
[07:41] <TED> Actually, I have another office, very near to JTC where
AIGS is located.. ok
[07:41] <Alain> Riniel is now studying at AIGS
[07:41] <Riniel> yup!
[07:41] <TED> never heated tsavorites. But you can oil them! ok
[07:41] <hehheh> :)
[07:42] <hehheh> Where's your main office? Chanthaburi?
[07:42] <hehheh> and some other questions
[07:43] <hehheh> how does Mae Sot and Mae Sai compare with Chanthaburi?
[07:43] <TED> i have my lab at Sala-daeng and my office at Surarak road
at the main jewelry district, 2 minute walk from JTC.. ok
[07:44] <Casimir> question
[07:44] <hehheh> Okay maybe I'll visit you in July
[07:44] <Casimir> Can You tell us something about gem-mining in the Yunnan
province in China?
[07:45] <TED> Amae-Sot is the "official" smullging port for Mogok goods;
Mae-Sai is the "official" smuggling port for Mong-Hsu rubiesa and some
jade.. ok
[07:46] <Riniel> yay!
[07:46] <Alain> Ted you have given us 4 hours of invaluable information
[07:47] <Alain> Is there anything you are working on that you would like
to share with us?
[07:47] <TED> Yunan is a great "new" mining district. mostly minerals,
not fantastic gems. I have seen both, i am not very impressed, but I am
not expert on Yunnan goods.. ok
[07:47] <Alain> Anything new that is, that wasn't covered thusfar
[07:48] <hehheh> yeah
[07:48] <hehheh> How's the jade trade in Thailand?
[07:48] <TED> I am sure there are more questions.. i plan to put my
thoughts and the results on my experiments in my forthcoming books. ok
[07:49] <Alain> We will look forward to that

[07:49] <Annie> yes, that would be nice
[07:49] <Barbra> This has been a wonderful evening. I have learned so much. Thank you, Ted!!!
[07:50] <hehheh> Thanks Ted
[07:50] <Alain> For everyone, the direct link to the books is at <http://themelis.com/P-Book-all.htm>
[07:50] <TED> Yeah, some jade is coming to thailand. but mostly it goes to China via Muse the major "official" smuggling port at the Chinese site.. ok
[07:50] <hehheh> And wish you a happy Thai New Year
[07:50] <Casimir> This chat-session has been very nice, and it has given me many new thoughts, from a whole new perspective. Thanks again..
[07:50] <Annie> Thank you Ted for the wealth of your knowledge you shared tonight with us !!
[07:51] <Frank> Thanks for tonight Ted...I've learned so much.
[07:51] <TED> ok everyone. it has been a long (and hopefully productive session). Good night and keep alert. Gem treatments will never stop.. k
[07:51] <Alain> Thank you very much Ted, you were fantastic
[07:51] <Alain> are*
[07:51] <hehheh> wow it's well past lunch time for you Ted
[07:51] <Casimir> See You soon, good bye all
[07:52] <Barbra> Good night everyone! Talk soon
[07:52] <Annie> Thank you to everyone attending this chat, also
[07:52] <TED> thanks Alain and the rest fo the crew.. !!!!!
[07:52] <Frank> That was GREAT...bed now...it's already time to get up :)
[07:52] <Alain> Night Barbra
[07:52] <Barbra> see you
[07:52] <Frank> cya all
[07:52] <Alain> Have a great birthday Frank
[07:52] <Frank> Thanks...I will
[07:52] <Annie> Happy Birthday to you Frank.
[07:52] <Alain> Ted, I'll contact you early next week
[07:53] <TED> Happy Birthday Frank..
[07:53] <TED> ok Alain.. good night..
[07:53] <Frank> Thanks...a nice birthday present talking with you Ted
[07:54] <Alain> Good day to you and thanks once more
[07:54] TED left irc: TED