The language needs thorough revision by a ntaive English speaker. – After almost 2 months of waiting for the review you have given me 7 days for the corrections. Since I am abroad working on a partner university where I have limited machine time, I have done the best I could.

Refererence? – added

Refererence? – added

Please avoid using thrid person pronouns. – corrected Wöhler designed many unique fatigue testing machines but their disadvantage was low operation speeds, for example the fastest rotating bending machine operated at 72 rpm (1.2 Hz), thus completing of experimental program took 12 years1.

Add to the table of materials. – this is a part of the Lasur ultrasonic testing system

What do you use? There is nothing you can use, you have sonotrodes with different geometry and each is calibrated for a different range of amplitudes. When you calculate the required stress according to the first half of the protocol you know which one to choose. Like when you want to loosen a nut. You measure that it has 10 mm so you take the 10 mm socket on wrench.

Add to the table of materials. – Again this is a part of the ultrasonic testing system.

**Add to the table of materials. – Done**

Add to the table of materials. – Done

Read or enter? – Read

What kind of specimen do you use? Add to the table of materials. - You use a specimen from a material which you want to test on resistance to cyclic loading. This method is for TESTING OF METALLIC MATERIALS PROPERTIES so you can use it for various materials, but each specimen has to be calculated and manufactured according to the resonance condition, which is described in points 1 and 2 of the protocol, manufacturing of the specimen is point 3. In the first round of review, reviewers suggest removing the specimen from the table of materials, because it is not essential to the method itself, so now I should add it back?

Do you mean „enter“? Also exactly what do you enter? You just use the lowest possible displacement amplitude for the particular sonotrode to see the resonance frequency and not damage the specimen. That is all, each type of sonotrode you choose has a different minimal loading amplitude so I cannot just write „Enter 4 um“. This point results from point 4.1.

Every subsection should have 1 or steps under it. – corrected, the step is 5.2.3

Add to the table of materials. Please also highlighted either 6.1 or 6.2. – it is a part of the ultrasonic testing system

Add to the table of materials. Please also highlighted either 6.1 or 6.2. – it is a part of the ultrasonic testing system

How ? What is done here? What will you show? Every subsection should have 1 or steps under it. – step was added 7.1 Open the valve of the air stream and adjust the pressure in the interval between 0.5 and 1 bar.

What exactly do you enter? How many cycles? – Again half of the protocol is calculation of the specimen and the loading amplitude. The testing is based on using various testing amplitudes and recording the number of loading cycles to fracture. So the question „how many cycles“ is absurd, because that is what you are testing and what your result is.

What is done here? Please describe all the actions. It is unclear what we can show here. Please understand, that when the specimen breaks, the test stops, because when a crack is initiated it changes the resonance frequency of the system (the stiffness is different) and after certain length the system is not able to resonate and the test is naturally stopped. This was explained several times in the protocol.

What is done here? Please describe all the actions. It is unclear what we can show here. – substep was added 10. 1 Screw off the specimen from the ultrasonic sonotrode.

**What is done here? Please describe all the actions. It is unclear what we can show here.** As when the test is naturally stopped, some part of the cross section is not broken and you just need to finish it so you have two separate fracture surfaces for analysis. The only condition is that you keep the type of the loading vector. It is absolutely a basic thing to anyone who works in the field of fatigue. There is no exact process, for this, you can do it in your fingers if the holding cross section is small enough, or you can use some kind of hydraulic machine, or mechanical or anything that will separate the specimen on two parts. In the previous version I had the tensile testing Instron machine listed for this, however the reviewer requested to remove it because it is not essential to the test and it does not matter what type of machine you use. What should I do?

What is the strength of the force? – The force is just enough to create the final fracture of the specimen. This is not a part of the test which you need to control. It differs on each specimen.

? do you mean shifted? – Yes, thank you.

What is the pressure? – This was explained, there is absolutely no reason to record these values, they do not tell anything and have no meaning to the fatigue test itself.

It will be useful is an arrow can be added to point it out. – the whole image is from the area of fatigue crack propagation, an arrow was added to show the direction of the crack propagation. To Fig. 3 description was added: Arrow shows the direction of fatigue crack propagation.

Which liquid and at what temperature? - added distilled water with anti-corrosive inhibitor at room temperature

How long? – added (several hours)

Which liquid and at what temperature? – added (distilled water with anti-corrosive inhibitor at room temperature)

Note: Please understand, that ultrasonic fatigue testing machine is a custom made device and hundreds of modifications are often done in the testing laboratories. For testing of particular material the specimen´s size and dimensions are modified to fulfill the resonance frequency. However, sometimes to be able to test a particular material you even modify the machine itself for example by manufacturing a special sonotrode. In this protocol was described a typical application of this device for tension-compression fatigue test setting, but still on some of your question there is no exact answer, because you always require some measure, but some points vary due to different material properties (for example enter the minimal displacement amplitude which is based on the sonotrode characteristic).