Response to REVIEWS ON THE MANUSCRIPT [18]

Thank you very much for reviewing my manuscript and for all suggestions.

Reviewer 1:

Thank you for the questions about the polaziration of the laser beam. I know that it is very important property of the laser and I thought a lot about it. Polarization doesn't effect the intensity because the coefficient od reflection depends on the difference of impedances of mediums and polarization doesn't effect it. Moreover, in program we used only geometric optics. This is the reason why the behaviour of system wouldn't change if we used non-polarized light or e.g. rotated laser.

About the other features of the flow like vicsous interaction in water; I'm not sure what exactly you mean, but all of these things would make this model very complicated and I'm not even sure on what would it effect the most. I know that this model is preaty simple, but it confirms the theory and shows good agreement with theory. Acctually I'm sceptic about how much more would more precize and complicated theory contribute to a better correspodence with measurements because neither measurements are the most precise.

I added in text that diameter was changed from 1.5 do 4.5 mm, and that the average velocities varied around few cm per second. They weren't determined empiricaly for each coefficient of parabola because I also couldn't think of any possible wayto do it. Also, velocities couldn't be determined theoretically due to unknown friction with nozzle. I tried but this are resons why I couldn't connect them with parabola coefficient. I definitely would if I knew how because I know that velocity is more easy to visualize that coefficient od parabola.

Reviewer 2:

I tried to correct and clarify all the given suggestions.

About the instability position. I definitely agree, it depends on nozzle diameter too but I didn't measure it for different nozzle diameters and I really don't know why. This graph is for the same jet for which intensity coefficient was measured.

I'm not sure about your assumption that at the larger horizontal distance (in case of jet with greater diameter) will the incidence angle decrese. It seems to me that it'll be rather greater (angle between light ray and normal to the surface) that smaller.

Reviewer 3:

I didn't made the error analysis, because this coefficient was determined from the fit on measurements. The value on x axis was 0.2 when y value of intensity was 30%. For some othe datas it would be little bit different, but this 30% isn't a strict boundary. It is not that under 30% it is bad and above it is great lightguide. This 30% is more like an estimation when the quality of transfering light changes drastically. But neither this 30% or 0.2 is strict or correct value.

In the end in conclusion chapter I added part wih leackage of my solution and comparison with real light guides.

I improved and marked some important parts on pictures, and corrected axis on graphs.

I retyped references properly, but I didn't refer in text on them. These three books I assigned as a literature I used only to inform myself more about the topic, but they are not necessary for understanding the theory (I think so).

Again, thank you a lot for reading and reviewing my manuscript, and I hope the corrections and answers will be acceptable. But I'll understand even if not because even I'm not perfectly satisfied with some parts too.

Regards,

Una