Innovation by Design
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Module - 03
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Lecture – 17
The working rig: Striving towards user satisfaction

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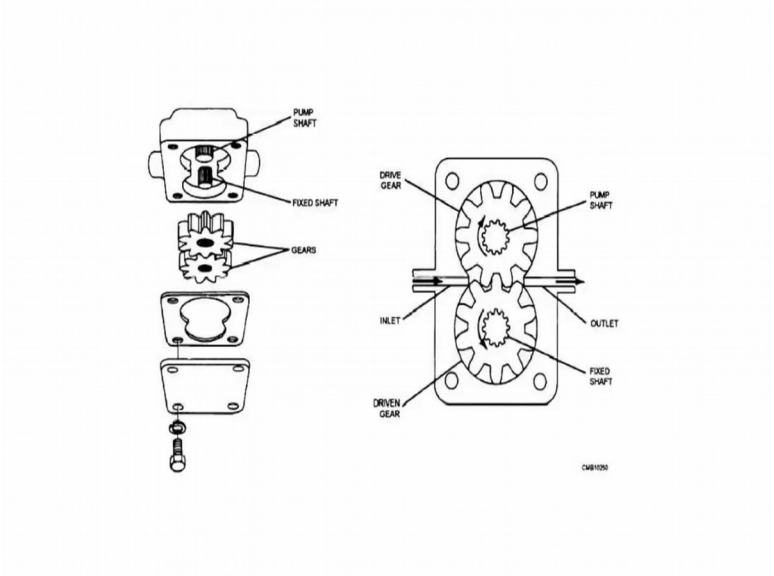

Professor Hemendra Arya comes from aerospace department. So, we said Professor Chakravarthy we use this small you know fuel pumps which have this mechanism where it takes fuel from small tanks and fills into aircrafts which are flown, then he said why cannot we use that pump in our water bottle.

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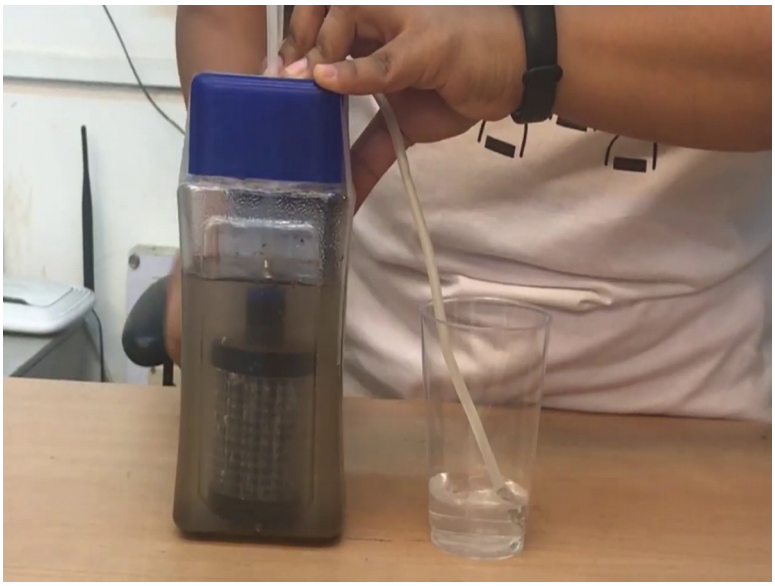

So, we immediately went online, we purchased this pump, fitted to a rig, see the rig is very critical this is a working rig there is a bottle of dirty water there is a pump which is what we are using and then we have the filter which is giving us all the filtration. You think I can go and give this to CRPF jawans?

Student: No.

So, why I cannot I givethis to CRPF Jawans?

Student: It is noisy.

It is very good. It is noisy what else quickly loudly it is noisy so it won't work. Not user friendly next.

Student: Not robust.

Not robust enough, all too many loose parts very good.

Student: No proper storage.

No proper storage just getting into the water, what else quick?

Student: small quantity (inaudible)

Good, but she is got a point here, how will the end user know that the water is clean and good?

How will I develop that confidence in the end user the water is clean? That is a design question which you have to solve by the look and feel of a bottle, make it look clean it should feel that you are getting pure water.

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So, that is the feeling which we need design and aesthetic and product form and all that we will have to generate that feeling. Because you have to believe in the product and what is believing in the product is about what you do is external form, how you package it, how you give it to them all those will matter that is a very good answer too. Any other points?

Student: It is inconvenient to carry also.

Inconvenient to carry very good that is the most serious problem. How many carry this so, many you know loose parts, we checked on the rig, but why in the rig very important?

Student: We know the principle works and now we have to make it.

Perfect. You know the principle works, you also experience as a designer how the principle is working you have first hand experience of cranking, of the tube coming out,

you push the tube back again then you say oh my, this connection is very critical for my end product because if the tube comes out because of the pressure, then there will be serious problem. So, you get to know a lot and this is we call design thinking. You go ahead and you know work and create multiple rigs and check how things work.

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So, then what happened is we went ahead with our process of design and as a rule we kept on engaging with all the CRPF jawans constantly.

And here I like to again draw another insight which is they gave us they said this bottles should be so, robust that when we on our operations we jump down. If the bottle comes and hits a stone beside there may have stone multiple things the bottle should not break because water is life for them. As you can see here that these CRPF personal came to our office and in the, you can see them in a line, the first one had 5 years experience in the field, the second one had 10 years experience in the field, the third one had 15 years experience in the field and different-different sectors and the type of lesson they gave me I cannot forget.