

**FROM THE PRESIDENT**  
**Prof. Dr. Madhusudan Bhattacharyya**

Dear Members,

You must be enjoying dreaming of the *Spring* awash with colours in this scorching summer (if the summer comes, can the spring be far behind?). The trees laugh with glowing green leaves, adore you with various flowers with petals of VIBGYOR hues. We all are obsessed with this time of The year. Don't you desire, our Institution look green also? Join the activities of The Association and generate new horizon of its programmes. The centenary is only four years away. The contribution of all our members is vital for successful Centenary Celebration of this oldest Professional Institute (Engineering) in India.

The parliamentary election of the world's largest democracy has sprung a big surprise! After decades a single party got a thumping majority in the Parliament thus putting an end to coalition era of governance. Let's hope for a BETTER INDIA.

Our Illiterate Engineer friend talks to us in his *Six Installment*.

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Hello Sodu, ok now? I heard, you were sick.

It's just heat-effect, nothing serious. Occasional intake of water with a pinch of salt and half a teaspoon of sugar has done me a miracle. What's about you, Sunil?

I am ok. Have you seen the newspiece how to stash money at home? Once a bureaucrat, he lies on a mat packed with notes of high denominations.

I skipped it. Of course, now-a-days I don't go through beyond the headlines of the political and administrative news. No surprise, 'water water everywhere' now is scam seam everywhere. The childish statements of the administration about investigations have no takers. Sunil, I wonder what does a man do with so much of money?

You are an engineer illiterate, you lag in 1Q, Sodu. They will pack their vaults (not lockers) with high priced metals like gold, platinum, exquisite gemstones, purchase all that are feasible and maintain so many bank accounts in fictitious names at home and abroad. The mere smell of money gives them a dignified(!) status in the society. They are above the laws of the land even if exceptions can be located by electronic microscope very rarely. They enjoy life their way.

I fail to realize how they enjoy amidst black cats fearing threat to their lives and their relatives', can you hear me Sunil?

Clearly, why this question?

Your voice is very faint, at times I missed what you said exactly.

My telephone needs retirement. I am giving you a ring from another telephone which, I trust, is not in a betrayal mode, Sunil laughs.

Yes, betrayal by human beings is not unique, an equipment can also betray! You may ask, how it's possible for an inanimate object. There must be human hands behind; I don't contradict.

Deflection in the shaft of a turbine generator in a thermal power station (TPS) measured too much near the bearing housing, 150 micrometer ( $\mu\text{m}$ ) against the permissible limit of 15  $\mu\text{m}$ ; the recorded deflection curve in their control room was checked by me in person.

Everything gets confusing, my friend. How could you be on the spot?

I used to train up their engineers in maintenance engineering and allied subjects. On the day, I was interacting with a batch of engineers from their different TPSs teaching vibration analysis.

There goes the high decibel sound, steam is bled out for quite some time. We fail to converse even inside the airconditioned seminar room.

One participant says, Steam is bled out Sir.

Yeah, you generate steam at cost and bleed steam at cost.

Sometimes when the pressure rises in the boiler above a set value, safety valve releases steam, Sir.

But it seems, steam is bled out, it's not safety valve doing.

After another 2/3 hours, same thing again.

After lunch break our business is running as usual; as about 3.30 p.m. the same incident recurs. Now friends, no longer in class room, let's go down to the spot.

We rush to the generator room. The station manager realises why all have come down. He says, we can't generate beyond 20–25 MW in this 60 MW unit, Sir; going beyond that produces excessive shaft deflection.

I am led to the control room, see the deflection graph. True thrice the incident has occurred; they seem to be content with whatever small generation is possible in this power starving state.

Can you bring me a wooden piece?

I stand by the bearing housing near the proximity probe (an instrument to show deflection), the other end of the wooden piece onto the bearing housing. I am sensing vibration.

Mr. Sen, is it possible to increase the generation?

Sir, we have already bled the steam thrice for excessive shaft deflection. It is.....

Then, you undergenerate the steam all the time!

No, Sir, something has to be done.

From the President

You have already had excessive deflection thrice. But if the shaft is already bent, the deflection graph, so far I have noted, would not have been compatible with those when the unit was running normally. Any way was this unit shut down for a few weeks?

Yes, sir, we started generation on this unit from this morning and you know what's happening.

Did you check up the probe fitting?

Our engineers have.

Hum, let me feel the vibration at the peak level. I am sure if the shaft has survived three peaks of vibration, it can also one more.

Let me see, Sir.

I am holding the wooden piece on the bearing housing. Steam is violently bled out, the station manager comes to me running.

I feel his exhaustible excitement.

It's already half past five. I have sensed nothing abnormal on the bearing housing. Mr. Sen, the probe is giving faulty readings, something wrong in probe fitting.

What do you advise Sir?

No advice, were I you I would have run the unit in full steam. Anyway, is the car ready?

Yes. I am direfully distressed, Sir.

God will cheer you up Mr. Sen.

After 3/4 days, Mr. Sen along with 3/4 engineers of his organisation comes to meet me at the university, their mood very jovial.

Sir, your observation was correct; the proximity probe was loosely fitted. Now, no problem. How did you infer that Sir?

I relied more on my sensory organ than the instrument's. I am as glad as you are, I should give you a treat.

Pankaj, can you bring some sweets?

No sir, we are just coming after lunch, only tea, if possible.

Over tea we chat. I am indeed thankful to you for conveying me this piece of news. This gentility is rarely shown by industries once their problems get solved. Your organisation is a rare exception, I must admit from my long association with you.

Did the instrument betray or their mechanic? Or a simple case of a silly but costly mistake?

I feel so sad when I reminisce how Mr. Sen along with his wife lost their lives in his car accident on way back from Digha to Kolkata.

By Bengali almanac it's the fag end of summer. By the weather man, monsoon should have reached Kolkata by June 7. Let's wait and see what happens on June 16, *Aashaarasya prathama*

*deebase* (1st day of *Aashaar*), a romantic day immortalised by Kalidas in his epic composition *Meghadutam* in Sanskrit long long ago. Its Bengali version I have read only due to my incompetence to go through the original text.

Rain God did not fail to respond as if to pay reverence to the Great Poet.

To-day is bright and sunny after a week when there was occasional drizzle; the road in front of the flat I reside in, is ideal for *Nandotsab* when many a people dance in mud treated with curd and turmeric for disinfection; those very people even would be panicky at the very sight of the mud, a mixture of clay interspersed with stone chips, brick pieces, sewer water and what not (courtesy building and road construction on the site). I am confined at home these days.

A management approach for motivation of the teaching community as prescribed by the Education Minister, Go to class regularly and earn a special increment. Are the defaulting teachers assured of service with regular increment? Dear honey, its money money and masspower; examples are already set by doctors even in government hospitals.

While in job I witnessed how the defaulting teachers and employees by dint of their closeness with the power group could go *as you like* and enjoy the windfall postings.

The day is still fresh in my mind when I rang up the Head, Mathematics Department, Why are your teachers not turning up in the classes of our boys?

We haven't finalized the routine yet.

But this is unjust, everybody knows when our session starts. Master Routine reached all the Heads concerned.

We are allotting teachers in to-day's departmental meeting.

Already two weeks' classes are lost. We get all brilliant boys and you are demoralizing them this way. It's unbecoming of teachers. Why are you so lackadaisical in attitude?

Enraged comes the reply, I am not accountable to you.

Of course you are; not giving gratis service. The general populace (and I am one of them) pay you all.

Are we, the teachers, claiming training of the future citizens, ourselves trained and committed to this noble profession?

A class, after the tiffin recess, is going blank. Out of 50 minute-period 20 minutes are already over. I enter the class, start friendly conversation with the students; I come to know that non-departmental arts and science teachers very often than not come late in the class. One lady peeps at the door. I see her. Whom do you want madam?

The students say, Sir, she is our English teacher.

Ok, please do come in. I am so sorry.

From the President

Puzzled she enters the class.

For the rest of the session, she attended the classes regularly and on time. By the propounded motivational technique mooted, she should be given a special increment, at last for this session. What you people say?

Why haven't you sent the marks for project of your boys? asked my Head.

They haven't completed the assignment Sir.

But they won't be allowed to write the final examinations.

That's their business Sir. I told them this also unambiguously day before yesterday.

One of the students of the group brings me a pack of drawing of their project work. I look at him, What? You have done all these in two days!

He stands in silence, simply nods his head. Unbelievable, I stare at him intensely.

Others of his group waiting outside enter. One of them says, Sir, he is a very fast drawer. From the very first year, he never used an eraser.

But when will you make the components? Hardly a fortnight to go before the final exams start.

We will be in the workshop from to-morrow if you approve the drawings, Sir.

Are you sure of the mating compounds, their finish and materials too?

Yes Sir, their reply.

Then sit on the chairs, let me check the drawings. Nice drawings, very neat and parts are meticulously numbered too.

Sir, Abhijit alone has done all these.

Incredible, I am simply amazed. I want to test Abhijit a little and give some 10/12 projection drawings of a few components. Draw the isometric drawings.

Sir, shall I do it now? Within a few minutes he completes the task using ball pen, so confident he is.

I look at him in admiration. I have never met such a boy in my 25 years' teaching profession. Start working from to-morrow.

My head calls me and says, Sodu for you I can't send the sessional marks to the controller of Exams.

You may send the marks showing their sessional incomplete, Sir.

But are you sure, they will complete the sessional, hardly two weeks left?

Yes Sir, certainly.

Then why not give them marks in anticipation?

No Sir, it is not a just method and I can hardly do justice to them.

Bhattacharyya

On the tenth day Anirban comes to me straight from the workshop running. He is gasping still, very excited.

Rest a while Anirban.

Sir, two pieces of m.s. rods we have welded on our friction welding machine.

Only two pieces?

No Sir, they are welding on the machine. He scratches his head, probably wants to tell me something else also.

Sir, such and such teachers have discouraged us, even they said that you are eccentric and crazy and harassing us for nothing.

I put a lid on his volcanic eruption and say, No no, they are only pained to see you working so hard in the workshop for 9/10 hours a day. They all love you so much.

He wants to say something more on the subject.

Go back to the workshop, bring back the welded ones. Make a few samples of a m.s. rounds and pipes. Then bring the machine here in my lab. I will bring the V.C. here to-morrow, if he is not out of station.

V.C. Prof. Chakraborty is very happy, says, All credit to you, Prof. Satpathy.

All the credit goes to these five students Sir. They have done a wonderful job, fabricated a Friction Welding Machine, in a short period. I was simply an onlooker to speak the truth.

The students got highest score in the sessional; it's but natural.

Two months have elapsed Abhijit at my residence, Sir, I have an altercation with my group leader at my work place.

You are in that consultation Firm, I heard. What about the fight?

Sir, my leader gave me a drawing of a spindle of same hand threads, for two ended grinder type machine, for study. I got bored over it and started reading a novel.

What, you are not studying the drawing? said the leader.

I have already, it will not work.

Abhijit, you are right. But you have hurt the ego of your group leader. Man-management was also taught, why didn't you apply the principle? Man-management is more important than technology management. After all, no machine works on its own, it has to be run by man. Anyway, no cause for worry. What can be the worst? You shall always get a better chance elsewhere.

A few days have only elapsed. Abhijit again, Sir, Chief Engineer called me and made me a group leader of machine design.

God, bless you my boy. You will go further, I am sure.

From the President

A gigantic experimental laboratory, whole of India is and specimen all citizens of India, wherein is being cooked a monstrously huge project, Aadhar under UIDAI. Although the project started in 2009, in September, 2012, capture of iris too was felt for authentication, in addition to the finger print on the presumption. "The iris does not get worn out with age or with use.....iris authentication is not impacted by changes in weather." But scientists working in iris biometric matching conclude that false nonmatch rate increases with increasing time, even increases by greater than 50 percent with two years time lapse.

"The standing committee on Finance (SCF) after yearlong consideration of the bill, and necessarily of the project, rejected both the proposed law and the project itself."

"On 31 January, 2013 confusion was manifest when ministers in the Union Cabinet said that they were unclear about the project, whether it is a number or a card, and what its link was with National Population Register. This was four years after the project had been set off, and a year and two months after the SCF report."

*(Source : The Statesman, July 11, 12 & 13, 2013 by Usha Ramanathan)*

Work on the project is running. It is needless to comment further save and except that the project provides unprecedented (and perpetual) marketing opportunities for the foreign companies making fingerprint and iris scanners as the project will be a never ending process for the sake of authentic identification. Remarkable that UK has already turned down a similar project as costly and unusable.

Friends it's upto you to find out the real objective of the project.

I was happy to learn that Abhijit, within three years of graduation, rose to the position of Chief Engineer in an MNC. So sweet a memory.

There is so much of unrest in the educational institutions triggered by outsiders and insiders. Many problems would get solved if father-son relationship develops between the teacher and the taught, very delicate job indeed but attainable though.

An MNC brought me a design for oil hydraulic arms to be put in place for an existing swinging (steel construction) bridge on the Hooghly river, for vetting. The bridge, in two lengths, is swung shoreward to allow passage of high vessels.

Vetting normally is confined to 'Design is ok or not'. The engineer, happened to be a student of mine, was the designer. So I went extramiles and checked thoroughly.

Better come next Saturday from the morning hours, say at 10-30 equipped with literatures and handbook etc. you have used in the design. Now I have to attend my class. So next week, Shyamal.

Shyamal came as scheduled.

Sir, I have checked the components you identified and made a little change.

Good, I go through his longhand design calculations, turn over the Handbook and literatures. This way I learn from my students. My student days are still continuing, Shyamal.

Yes Sir, we learn till the D. day.

Well Shyamal, how would you manufacture so long a cylinder for the piston pump? In and around Kolkata there is no such facility.

We have negotiated with a Chinese Firm (a Japanese One?) Sir,

Good then, hope they supply on time.

Two years rolled on, Shyamal over my residential phone at night, Sir, we are in difficulty regarding the hydraulic system you have vetted two years ago.

I quipped, I hope not the cylinders.

Sir, It's my fault, I relied on the foreign firm. They have put us in soup. They are charging many times more than they quoted for the cylinders. I should have put before our management your reservation about the cylinder availability. I feel guilty Sir, that I had more respect for the foreigners.

You need not be that perturbed Shyamal, the whole of our country is obsessed like you.

Sir, I have been at the university to-day; Your bearer said that your class would continue upto evening hours and learnt that tomorrow you were retiring.

How are your sons? Ok?

A broken voice, my elder one died six months ago at 16 and the other one is also diagnosed to have leukomia. We are completely ruined Sir.

Look Shymal, life is such. May Good give yo strength. Come to-morrow with the consultancy cheque along with an official letter. I will do my last consultancy work at the University and help you sort your problem.

I put my noting on the body of the letter Shymal brought. Go to the cash counter via Registrar. Bring the receipt, I am free to-day. I handed over the charge yesterday, the keys, the files I used to maintain; one almirah full of books and theses, etc to the departmental library. I am so morose, a little upset that I will be an external element here from to-morrow, which gave me an identity of mine within and without. It is as if my umbilical cord is severed. I search my heart and realise that I am totally upset; I would have unwound myself if I could cry aloud. But alas, we all are used to sermoning others about the inevitability in life; mockery is I don't reconcile myself to what I say. What a painful turmoil at heart!

The department wanted to arrange a farewell. With folded hands, I told them that it would be too much to bear. Please don't remind me afresh, You are an outsider from the next dawn. I



From the President

live the rest of my life with the pleasant thought that a teacher is immortalised in the minds of the students, the most valued treasure teachers nourish at heart.

What is your programme in your retired life, Sir? asked one young teacher.

Life is an evergrowing process. It changes its game. One thing I am firm about—not to accept any salaried job in any organisation. I have been servant of others so long. Now I will be my own boss, i.e, a free man so far the ambience permits. My boss at home, my high voltage lady is in favour of entering into another round of regular service, wants money, more money. There is a clash with my wife naturally and here I do not buzz. I feel doing what gives me mental satisfaction and self fulfillment. Should I be approached, I will continue consultancy upto 70 with fee, but beyond is hazy. After all, God not averse, I will have two square meals a day unlike 70 percent of our countrymen. Here also my conscience pricks that we are privileged class. To lessen my guilt feeling I want to offer my humble self at the altar of social work in the field I am adept, and I am happy God listened to my prayer.

Sir, here is the money receipt.

Find out the drawing of the hydraulic cylinder.

Shyamal, why don't you make necessary alteration if the piston pump is changed to a plunger pump? Then cylinder bore needs no machining. Fabricate the cylinder by welding two semicircular halves of steel by single V-welding with no root land, first pass welding with 3.15 mm low hydrogen electrode, current value set at lower end to eliminate weld metal protrusion on the inside of the cylinder. A little ovalinity on the bore does not matter. One of the open ends be closed with steel casting with sufficient axial length, which is bored to accommodate long stuffing box for bronze bush through which the plunger reciprocates. Other end of the cylinder should be closed by steel casting of axial length commensurate with the design. What do you think Shyamal, is it workable?

Yes Sir. If I get stuck I will contact you later.

I make out a letter containing the recommendation and hand five copies to Shymal. Take these to the dispatch section for putting reference number and the dispatch will give you your copy. Hope this will solve your problem.

Shyamal never contacted me later and his company kept me in the dark about the result. Only in 2009 some ex-engineer of the company met me for a different reason when I came to know with delight that the design worked.

But to my misfortune I wanted to know the whereabouts of Shyamal. Shyamal and his spouse have been living mentally deranged after their surviving son had expired. I felt so sad.

This morning stray thoughts haunt me. So many things I am ignorant of. Do I know what the next moment has in store for me? Does anybody really know it? At least I know that I am

Bhattacharyya

not a prophet. At times I suffer from identity crisis.

A judge courting jail, a minister under bars, a professor misappropriating a purchase bill, a chairman of a regulatory authority caught red handed accepting bribe, an innervoice interpreted by different quarter in different angles as it suites, some one exercising authority not accepting the causal responsibility and the list goes unending. What's their real identity. No, even the omnipresent God is unaware of.

When I am taxing my brain what to scribble now, landphone rings.

Ajoy asks me whether I already know that Pranab, our classmate had expired.

Yeah, no need.....my wife has already conveyed me the news that Pranab expired at Mumbai two days back. This news is evident at our age group. But you are not sick Ajoy, but ok as your lively voice declares.

I rang up Mumbai yesterday again. An unknown voice over the other end. Who are you speaking please?

I am his eldest son. I was away.

You work at Chennai, nah?

Yeah yeah.

When did you come?

On hearing the death news.

So, professor, look! Property left by Pronab attracted his son like a giant magnet on a piece of iron! Ailing father not worth caring!

Don't be swayed away by the old sentiment. Things these days have changed a lot. So Ajoy you are hale and hearty now, at last I desire that way. Let's live so long desired by the Almighty. Hope to meeting you sometimes soon.

Sd/- Sadananda Satpathi

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With fraternal best wishes and greetings,

Truely Yours,

07.06.2014

Sd/- Prof. Dr. Madhusudan Bhattacharyya