



45 years of blessings & still counting

HOW DID IT ALL BEGIN?

I can't help but smile when I recall the series of coincidences that led to my 45-year long career.

- **Coincidence one:** As a 21-year-old constantly dreaming of city life one day, I was having a chat with a friend and he randomly suggested that "Institute of Paper Technology (Saharanpur, UP)" could be worth exploring for further studies.
- **Coincidence two:** With a BSc background, I barely knew anything of significance about the Institute, their post-graduate diploma course and the industry it prepared one for. But, words like Pulp, Paper and Technology resonated for some reason and I applied. But, all the excitement faded when I was notified that enough candidates had already been admitted and my application would be wait listed. It seemed that was it.
- **Coincidence three:** In July 1974, three days before admissions closed, an admitted student pulled out to pursue a job opportunity. I happened to be the first person on the wait list and was offered his spot at the last minute. I started to believe in destiny, travelled to the Institute by overnight train, paid the admission deposit and started the course.
- **Coincidence four:** Despite pouring all my energy into academics after commencement, fear was my constant companion as I had no idea how I would arrange funds to pay for the course fees eventually. Thankfully, financial assistance (an IPPTA scholarship in the first semester) helped to dodge that bullet. Two years later, graduating with a Diploma in Pulp & Paper Technology, I was offered a Management Trainee position with Ballarpur Industries Limited (BILT) through campus interviews.

I had no idea at that point in time but a journey around the world was just about to begin!

WORK EXPERIENCE AT A GLANCE

1976 -1978	BILT - Yamuna Nagar Mill, India
1978 -1980	BILT - New Delhi HQ, India
1981 -1985	Phoenix Pulp & Paper - New mill project site, Thailand
1985 -1990	BILT - New Delhi HQ, India
1990 - 2000	Betz Paper Chem, Betz Dearborn and later Hercules (USA MNC), Singapore
2000 - Present	Amazon Papyrus Chemicals Ltd, Singapore

Career highlights, Industry trends and “Believe it or not!”

Please see the attached Appendix.

And a special thanks goes out to.....

It is safe to say that various career and personal growth opportunities were only made possible by the help and guidance of industry practitioners such as:

Mr. RK Jalan	Mr. SC Paruthi	Mr. Avinash Taneja	Mr. Lorne Byzyna	Mr. Mana Yingyong
Dr. Subhash Saxena	Mr. Haveli Ram Bhatia	Mr. Jack Turner	Mr. Chai Ming Chung	Ms, Jintana Jackpeng
Mr. KC Mittal	Mr. VS Mrig	Mr. MK Tara	Mr. Anil Kaul	Mr. Freddie Sandel
Dr. NJ Rao	Mr. BM Khurana	Mr. Ray Barnes	Mr. Ramdas Alva	Mr. Chen Xu Xing
Mr. MV Prabhakaran	Mr. VK Jauhari	Mr. Chandra Shekhar	Dr. Jonathan Chan	Dr. Subhash Maheswari
Mr. Ye Htut	Mr. SK Nangia	Mr. MP Grundy	Mr. Pierre Mouyal	Mr. Harendra Thakur
Mr. SK Mittal	Mr. VP Leekha	Mr. Henry Landry	Mr. Parveen Gupta	Mr. Tan Yong Lim
Mr. RC Sinha	Mr. RR Vederah	Mr. Dave Code	Mr. Ilham Syukri	Mr. Eduward Ginting

I would like to take this opportunity to express my heartfelt gratitude to these people and many others I have had the chance to work with in some way or the other.

Also, a big thanks to my wife Kalpna Biyani, daughter Dr. Mukti Biyani and son Amit Biyani for always supporting me all through.

What else has changed over the years?

In keeping up with the spirit of chance encounters and randomness that appear to be “life”, here are some observations of how the world has evolved since I was a student:

Year 1974	Year 2020
<ul style="list-style-type: none">● Studied from library books, compendiums and hand written notes.● 1 USD was Rs 8 and salary was paid cash in envelopes.● Indian pulp & paper mills had a production capacity of 30-150 tonnes per day (tpd).● Employees in mills used paper log books for shift/day reporting (e.g. volume, quality, stoppage etc).	<ul style="list-style-type: none">● Google appears to be every student’s new best friend.● 1 USD is about Rs 75 and everything is cashless.● 1,100 tpd is now possible in India and bigger markets, Indonesia and China, have touched 2,000 to 8,000 tpd.● Automation, real-time reporting and Robotics have taken over.

Finally, thank you to IPPTA for this opportunity to share some memories and for accompanying me on this journey right from my student days!

Shyam S Biyani

Career highlights, industry trends and “Believe it or not!”

1976 – 1978: BILT Yamuna Nagar Mill, India

Highlights:

- After rotating through various departments in the first year, my first operations experience was gained in a 50 tpd capacity line producing Pulp from Bhabar grass and Rags.
- Following that, I moved to a machine house equipped with 3 small capacity paper machines (15 -25 tpd) producing Sunlit Bond paper, Blue wove and Azurelaid paper with Acidic sizing (Rosin & Alum) and Clay as filler.
- Spent nine months on a high-speed machine (60 tpd) producing cream wove paper, using a mixture of wood and straw pulp.

Believe it or not:

- The 2-4 week rotations across each mill department were a big blessing as they provided an overview of all the operations of a pulp and paper mill, very early in my career.
- **To this day, I consider the formative years in the Yamuna Nagar mill as one of the best things that ever happened to my career!**

1978 – 1980: BILT New Delhi HQ, India

Highlights:

- Was selected as a part of a team tasked with putting up a 212 tpd capacity market pulp mill project (Kenaf) in NE Thailand - a great experience of a green field project involving technology & equipment selection for fiber line.
- Conducted trials for Kenaf cooking, washing and bleaching. Also, attended trainings in Europe on Continuous digester, ClO₂ bleaching, Pulp Dryer and Baling systems.

Believe it or not:

Moving to New Delhi HQ fulfilled my long-standing dream of city life and travelling to Europe for

training allowed me to see the world outside India for the first time at the age of 27!

1981 – 1985: Phoenix Pulp & Paper Co. New mill project site in Thailand

Highlights:

- Posted by Bilt to North East Thailand to assist with the commissioning of new mill operations. This was my first chance to handle operations via a control panel.
- Conducted training for Thai supervisors / operators in all areas of production for 4 months.
- Participated in commissioning of fiber line: chopper house to pulp baling area.

Believe it or not:

- We were based in the countryside, almost 7 hours away from Bangkok.
- As only a handful of locals spoke English, I took Thai classes for two months to meet personal and business communication needs (such as preparation of training materials).
- We had conducted plant trials for Kenaf cooking, washing and bleaching but somehow missed a similar trial for pulp dryer. Start-up of the mill went fairly smoothly, however drying capacity of the cylinder pulp dryer failed the performance test. Eventually, the supplier of the pulp dryer put additional drying capacity with Flakt Air Dryer. Full production capacity of 212 tpd was achieved 9 months later than originally planned and a big lesson was learnt!

1986 – 1990: BILT New Delhi HQ, India

Highlights:

- Relocated back to New Delhi and worked on different projects across India.
- Upgraded two paper machines producing MG paper for bread wrapping. Replaced table rolls with ceramic hydrofoils and vacuum foils from IBS Austria and achieved significant improvement in paper quality (porosity) and productivity.

- Spent a year to upgrade a 90 tpd paper machine to 120 tpd for production of maplitho and office paper.
- In the last two years, planned and selected the technology & equipment for Recycled fiber (NDLK and OCC) based Extensible Sack Kraft Paper production (Clupak technology) and Multiply Paper Sacks manufacturing for cement packaging.

Believe it or not:

A project to manufacture Liquid Packaging Board under the guidance of a consultant, Geoff Nuttall from the UK, was scrapped four months after it began. This was due to various performance metrics not being met, despite our best efforts. That was a tough pill to swallow.

1990 – 2000: Betz PaperChem, Betz Dearborn and later Hercules (American MNC), Singapore

Highlights and industry trends:

- Moved to Singapore in a newly created role of a Technical Specialist Asia Pacific (Pulp and Paper). This was a very big change for me, to go from a mill operations background to providing marketing & technical support for Specialty Chemicals applications to Pulp & Paper mills across ASEAN countries, China, Taiwan, Japan, Australia and South Africa.
- The first big challenge: We were asked to eliminate / minimize defects (pin holes) caused by Dammar Resin in fine paper sheets, a problem peculiar to mixed tropical hardwood native to equatorial regions. It took close to four years, hundreds of man-hours of research, lab and mill trials to reach a satisfactory solution with a combination of specialty chemicals and mechanical separation (forward and reverse cleaners).
- A new trend emerged in 1993 as the industry started switching from acidic to alkaline paper making. As MB Slime Control and Continuous Conditioning of press felts became important requirements, I developed expertise in these applications.

- 1996 to 2000 saw a phenomenal growth in the industry with the rise of large capacity pulp and paper mills in China and Indonesia. In addition to great opportunities to participate in the commissioning stages, I was privileged to run specialty chemicals applications in various mills across China, Indonesia, Malaysia, Thailand, India, Philippines, Australia, Japan, Taiwan and South Africa.

Believe it or not:

- Prior to Singapore, all my previous experience related to small capacity pulp mills and paper machines. For this new role focused on large capacity mills, I had to undergo a four-week intensive training program in the US, including mill visits. To build up confidence further, I invested a significant amount of time to read training materials, manuals, case histories from US, Europe and South Africa, to stay afloat.
- I had no computer literacy before moving to Singapore. At the age of 37, I enrolled for my first computer lessons to keep up with colleagues, who all seemed computer-savvy.
- With no smart phones to turn to, I often had to depend on local language dictionaries (Chinese, Bahasa Indonesia and Malay) for communication and translation in the first few years. This was quite challenging at times. At least, the Thai language I had learnt in the 80s came to my rescue when visiting Thai mills!

2000 – 2020: Amazon Papyrus Chemicals, Singapore

Highlights and industry trends:

- Amazon Papyrus Chemicals was formed in 2000 by a group of 12 colleagues. I joined as a Partner, taking on a new challenge as a Technical Director.
- 2002 saw impositions of restrictions on use of mixed tropical hardwood for pulping. Acacia Mangium pulping gained big momentum and slowly over 5-7 years, became the fiber of choice for paper making. That generated opportunities for developing suitable specialty

chemicals for lowering DCM Extractives in pulp to meet demand, especially from tissue paper producers.

- With mills putting up multiple large capacity paper machines (up to 1,400 tpd) in the same complex, this decade saw capacity of pulp & paper mills increase up to 8,000 tpd. Riding on this quantum jump in production capacity in SE Asia, China and India, I celebrated a special 10 years with Amazon Papyrus Chemicals in September 2010.
- 2011 onwards: High Yield Alkaline Peroxide Mechanical Pulp, Tissue Paper production, Recycled fiber-based paper (packaging, tissue) and Dissolving Grade Pulp, have led the next phase of growth in the industry.
- In 2016, started developing specialty chemicals applications for Viscose plants in China, Indonesia and Thailand.
- Seeing opportunities for Slag Control at Recovery Boiler applications (that enable the boiler to run continuously for 10-12 months without water wash), Amazon partnered with an American MNC to bring this technology to Asia. This application has provided a significant financial return to pulp & paper producers in the last 18 months.

Believe it or not:



- I got my first opportunity to run specialty chemicals applications in Dissolving Grade Pulp mills in Indonesia in 2003. Incredibly enough, the last time I had worked on this technology was back in 1976, during my final year thesis “Rayon (Dissolving) Grade Pulp from Bagasse with Prehydrolysis & Kraft Cooking”, which was published in the IPPTA magazine. That previous background proved to be invaluable and was practically applied in mills across China, Indonesia, Thailand and Laos, almost 27 years later.
- At the age of 47, left the safety net of a high-profile job in an American MNC to become an entrepreneur with Amazon Papyrus Chemicals. Turned out to be a great move, as I now look forward to celebrating 20 years with the company in September 2020!

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