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Haiguotou's "model around you" Sanju Environmental Protection Li Lin: Overcome the world's problems and lead the way in bioenergy

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Recently, Beijing Haidian District State-owned Assets Investment and Management Co., Ltd. carried out the theme education of "never forget the original heart, keep in mind the mission" and "models around you" typical character publicity campaign, aiming to inspire all employees with role models who are based on their posts and work hard to feel unity The working atmosphere of forging ahead, daring to think and fight, gathers strong positive energy for the development of the enterprise. Today, let us follow the lens and get to know Li Lin, a pioneer in the petrochemical industry and a writer of green energy.

Li Lin



Member of the Communist Party of China, professor-level senior engineer. Has been engaged in petrochemical engineering technology development, engineering design, engineering project management and project production management for more than 30 years. He is proficient in

chemical thermodynamics, reaction kinetics, system analysis, overall synthesis and process simulation of industrial continuous processes. Experience in process simulation, engineering scale-up, new technology development and design, and engineering construction. Since September 2017, he has served as the deputy general manager and director of Sanju Environmental Protection; since November 2019, he has served as the general manager of Sanju Environmental Protection.

Over the past 40 years, he has worked hard and forged ahead, picking up several pearls in the world's heavy oil processing field. He has overcome obstacles and decisively seized opportunities to overcome several world problems through three industry changes. From youthful spirit to sophistication, Li Lin lived up to his youth and became a generalist in oil refining technology; fulfilled his mission and overcame the problems in the world of suspended beds; not to be outdone, he took the lead in the bioenergy industry, and continued to dedicate himself to the petrochemical industry with passion. It writes a splendid life movement of a struggler.

In the 1980s, my country's heavy oil catalytic cracking technology started, and a series of production problems occurred frequently. At that time, Li Lin had just graduated from university and was assigned to work in the catalytic cracking workshop of Sinopec Luoyang Petrochemical General Plant. His fate with technological innovation in the petrochemical industry began from then on. At that time, the conditions were difficult. Li Lin saw the gap between China's petrochemical technology and the world's top level, and he became more determined to use his talents and knowledge to make some achievements in the petrochemical industry. After twenty years of hard work, Li Lin has become a rare all-round talent in the oil refining industry. He not only has a deep and comprehensive understanding of oil refining theory, catalytic cracking technology, hydrocracking technology, ebullating bed hydrogenation technology, and visbreaking technology. Moreover, he is proficient in everything from process package design to engineering design to reactor design and material selection; he is proficient in all eighteen martial arts in process development, engineering design and production management. In 2000, Li Lin led the development of pure asphaltene visbreaking technology, overcame the world problem of super-heavy asphalt visbreaking, and applied for a national patent.

In the 21st century, with the rapid development of science and technology, the oil refining industry is also facing new challenges: the proportion of heavy oil and low-quality oil has increased, and conventional processing technology has been unable to cope. In China, which is highly dependent on imports of crude oil, this challenge is even more severe. Suspension bed hydrogenation technology is the first choice to solve the problem, but because the key technology cannot be broken through, previous attempts have been fruitless. Li Lin, who is good

at gnawing hard bones, has become more and more eager to overcome the suspension bed technology. He believes that a country with a large energy consumption cannot do without leading heavy oil processing technology. Suspension bed hydrogenation technology is crucial to my country's energy security. This is the historical mission of himself and other Sanju people. The biggest regret in this life. In order to conquer the fortress of reactor design, Li Lin spent a lot of time thinking, calculating, and designing day after day, and he and his team overcame a series of problems such as reactor coking and clogging, catalyst separation, and prevention of overheating accidents. On February 21, 2016, the MCT suspension bed hydrogenation industrial demonstration unit located in Hebi, Henan Province was successfully started up for the first time and achieved stable operation, which marked a major breakthrough in my country's heavy oil processing technology and reached the international leading level.

In the tide of the global energy revolution, biomass energy is undoubtedly one of the most effective measures to reduce carbon emissions internationally recognized. Many international oil companies are constantly promoting the process of biomass energy. At that time, Sanju's environmental protection decision-makers asked whether the suspension bed could be used to process biodiesel. Without any hesitation, he decided to overcome this difficulty. In theory, processing biomass is easier than processing heavy oil and coal tar, but this is not the case. Animal and vegetable oils and fats have high oxygen content, and equipment, processes, and catalysts all need to be greatly adjusted. The risk and difficulty are no less than the first start-up of a suspended bed. , no matter how careful and rigorous the consideration is, all kinds of accidents will inevitably occur at the driving scene. After calculations, experiments, and attempts again and again, Li Lin has repeatedly failed and failed. After more than two years of arduous exploration, on July 2, 2019, the second-generation bio Diesel gurgles out from the outlet, and the color is as clear and clear as spring water. Compared with the traditional fixed-bed hydrogenation technology, the MCT suspension-bed hydrogenation technology has greatly improved the production level and reduced operating costs. On July 12, Sanju Bioenergy International Co., Ltd. signed its first sales order with a European customer, another "world's first" that won Li Lin the praise of domestic and foreign counterparts again. Because of his unremitting efforts, in addition to the honor of "world leader in heavy oil processing technology", China's energy industry has added another laurels - "leader in bio-energy processing technology".

Sticking to the green hills and not letting go, the roots are originally in the broken rocks, and the tenacity is still strong. He has been in the business for more than 40 years, and Li Lin has deeply immersed himself in the petrochemical industry. Overcome difficulties and vow to do something for the country with his whole life. Despite the continuous development and transformation of the petrochemical industry, Li Lin still used his wisdom to pick one after another pearls in the

world's heavy oil processing field, and used them to illuminate the bright prospects of my country's biomass energy.