

Production Internship Report

Shuaihu WU

Overall

From July 2nd to August 3rd, 2019, I did a five-week execution internship at Renault's factory in Flins. Squeezing in a small studio of 30m² with SU Chuanjin and ZHENG Guodong, riding a scooter to work every day, I worked as a worker of the assembly line for five weeks. It is hard to comment on this experience. I seem to have not much gain, since the only thing I did is take screws from box and put it one the car, which is highly unlikely to be the thing I will do in the future. On the other hand, I did learn a lot: I now have a clear and specific impression of normal workers' lives, which is surely not what I have imagined. I also had a glimpse of the method of management of workers, organisation of production as well as the manufacture of cars. Renault, one of the leading car manufacturer, was certainly a great start of my explore of industry world.



my team with the last Zoe v.1 in the world

My working experience

The work is harder than I expected. Before I went, I still had a romantic illusion about the life of the workers: since I only work 7 hours a day, I still have 9 hours to freely distribute after 8 hours of sleep. I can read books, play games, study my subjects and this month will be full and meaningful. However, it should not be counted like this. The correct calculation is: 7 hours a day (actually 7 hours and 20 minutes) of really work, if you count the rest time(2*10min) in the middle, there are 8 hours in the factory, so 9 hours including the commute. Hard work needs good sleep, sleep time of one day should be counted as 10 hours. Plus two hours of bathing, dishwashing and other chores, the free time of a day is only three hours, and often cannot be achieved. So, in a sense, 7 hours of work is equivalent to giving the whole day to the factory. The capitalist's careful calculations are evident.

The work intensity is also higher than expected. We are doing the work of ordinary workers completely, moving parts, putting screws and screwing. In fact, the requirement of strength of the arm is not much, it may be because that these positions are designed to be able to do as long as someone is a human. But being unable to sit down was indeed a test for my feet. On the first day, I was transferred to where Zheng works to help. I walked nearly 30,000 steps that day. It was really unbearable, and I also realized that the protection shoes were hard as iron, so the rest of the days I had only on mind in my head, which was go to Decathlon to buy insoles in the weekends. I want the best insoles to save me. Later, I changed my position, and I used to walk 10k steps every day. With the high technology insoles, the foot gradually became painless. I do not know if it is because my tolerance is improved, or the requirements of the walking is reduced. Maybe both.

There is another anecdote that can explain the damage of the work to my mind: I was sleeping one day, then I woke up to go to the toilet, but my mind still thought that I was at work, so the first thing I did after got up was looking around to find parts, but in my room I found nothing, I felt both confused and panicked, worried about the assembly line would stop. But physiologically, I still drove myself to the toilet. After I came out of the toilet, my head was still not awake. I still stayed in the confusion of not finding the parts. Finally, because I felt too sleepy and I had a bed in front of me. I simply lay down and slept again.

What still needs to be explained is that my last three weeks of work did not belong to one person. Most of the time, I worked with others to complete this position. Although I highly doubt that this position is not something that ordinary people can handle. In the last week, although I was quite skillful and the process was optimized, I could only do 70% of the work at the rate of the assembly line. But it is true that two people doing this work is a little relaxing. I probably have 20%

of the time to rest - provided that the two are already very tacit, which is only achieved in the last few days of working with Maria.

The design of work in the factory

The Renault plant is a complete automotive assembly plant that starts with individual parts and a few hundred meters of assembly line will complete the production of the entire vehicle. The workshop is mainly divided into assembly workshop and paint workshop. The entire factory covers an area of 237ha and employs more than 2,000 employees. The area of the factory is almost as large as the town next to it, and the huge employment has also driven the surrounding economic development.

The design of the assembly line is completely foolish, with the use of advanced tools to minimize human error. Here are two obvious examples. At the beginning I was doing a loading position. The requirement is to take the parts ordered from their original boxes to another box. This post is designed to be well guided, like an orienteering match. Each part library has a small light. When you need to take this part, the small light will light up. Before taking the part, remember to pad on the light and then take the part, so you can nearly eliminate the accident of forgetting a part or take it again. In my later assembly line position, the work was basically put the screws in the designated position of the chassis and fasten some of the screws. The slots of the screws are usually different in size or shape, which solves the problem of misalignment of the screws. The tools for tightening the screws are all connected to the system, so if you forget to fasten a car, the system will alarm when the time is up, and the assembly line will stop. At the beginning, my work did not involve fastening. I was looking forward to the alarm which means that the assembly line would stop and I could take a break; but then I was also responsible for fastening the screws. I began to afraid of that voice. Every time it rang, I would look up and see if it was my problem. That voice almost became my nightmare.

Manufacturing cars is a relatively heavy industry, and the work is very rough. Basically, if it looks good, it is done. It does not matter if the screw is really screwed correctly, as long as the object can be fastened. Many times, solving problems is based on vigorous miracles. This is not very rigorous to me, but it may not be a problem.

Human resource system

The structure of the factory is quite clear. The workers doing the basic job around the assembly line usually has a contract of CDD. As far I know, it is a kind of short-term contract. They are mostly

foreigners, mostly from Africa. A little higher, small supervisor like the one taking responsibility for my team of 10 people, have a contract of CDI. Each of them owns a yellow vest. Their job is to keep the line marching, usually do some maintains and solve accidents. When someone has something emergency and have to leave for a well, is them who need to take that place and work for a while.

The more powerful supervisors, such as chef Sylvain, has no particular work, so they do not need to wear gloves on their hands. What they need to do is also keep the line function, but they cover more area, grade more people (around 20) and have more power. They can communicate with other teams and report to higher level an issue if necessary. As a normal worker, they are the highest post I can talk to.

To me, CDD/CDI is an interesting system. I do not know if it has its counterpart in China. CDD workers in Renault can only sign a contract up to 18 months at a time and must leave for 6 months. This point is very unfriendly to my workers in my opinion. What if the factory does not recruit you after 6 months? And how should you live in these six months? But most of the workers do not think so. On the one hand, they are young and strong. They are not worried that the factory will not want them. On the other hand, they are willing to have a free life for half a year. If they want to make money, they will some small jobs. If they do not want to make money, they can rest at home. Maybe it is true for most of them, I still found some workers under pressure, such as Daniel. He works more seriously than others, and always make his best effort to reduce any possibility of error. Every time the assembly line is suspended, we will take a break, but he will use this time to fill the parts and build the screws into a hill, so that the following work can be carried out in the most perfect state. I think that he feels a bit sincere and fearful. It may because he is older, knowing that he can no longer work as a young person. If it is exposed at work, he may not be recruited in the next contact. Daniel's life made me very sympathetic, so every time he asked me to help fill in the missing parts, I readily agreed, even though I have not finished my business.

What I think can be improved.

1. Labor insurance supplies can be more well-designed. I can feel that the factory Renault really concern about the protection of workers. My first lecture after I entered the factory is about security. They made a good speech, and the vivid photo of people hurt is really impressive. To be safe, taking care is of course the most important thing, while the labor insurance supplies are necessary too. As I had mentioned, the protecting shoes are really hard and heavy. And the truth is that, in my team, I'm the only one who is willing to wear these shoes. All other workers, they ware their own sneakers. It can be understood, because in team there is nothing really heavy. But it is still a dangerous thing not to ware

the shoes required. I know persuading the workers to wear stupid heavy shoes when it seems necessary seems impossible, so the break out need to be done by the design of the shoes. It can be more comfortable, like me putting a pair of good insoles. The situation about helmet is the same. Many workers don't want to wear the helmet provided, and it is because the helmets are airtight and uncomfortable.

2. Working tools still have room for improvement. I was first shocked by the tools we used in the factory, they are really advanced and each one can cost thousand euros. But they are not yet perfect. One of the tools I have used has a really strong reaction force at the end of fastening a screw. Nearly each of my fingers of my left hand has a bruise caused by it. In the end, though I was quite skillful, I still cannot fully escape the accident. Once there was a girl who tried my post and gave up soon because of this tool. I noticed that the tools are usually provided by Bosch or Stanley. They are all great companies in this field and I think they have the ability to make things better. Maybe it is because they don't know their users' experience.
3. Some of the posts can be replaced by robots. In my point of view, Renault just put a robot in the post which people cannot do, like raising really heavy items. But the fact is that some of the posts are really easy that I think they can also be finished by a robot. I know the real world is more than "can" or "cannot". Using more robots is not only a matter of technology, but also a matter of society. It will make people lose their jobs and this has already caused panic. But I still think machine replacing person is the trend. An ideal worker to employers is someone who has no personality, who can do the same thing every day at the same quality. If better, all workers should be the same: same speed and same proficiency. That contradicts human nature. We are born to be different. But the machine, they are born to be the same, they are really suitable for the work in the factory. From my point of view, the thing that really matters is not whether we should use robots, but how to live with robots.