## I. Dynasty 36

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Time flies when one is idle. Since Li San left for Chang'an, half a month had passed in the blink of an eye.

During these two weeks, the snow in Qingzhou had been intermittent, and the accumulated snow in the city was deep enough to reach a person's knees. When the sun came out and melted the snow, the roads became extremely muddy.

As a result, the people of Qingzhou were even less inclined to venture outside.

Xiao Ming shared the same sentiment as the townsfolk. Apart from occasionally visiting the Engineering Department to oversee progress, he spent most of his time in the prince's residence drawing. Today, he had finally completed the structural diagrams, overall renderings, and detailed node drawings for the galleon.

"Thankfully, I have some artistic skills," Xiao Ming said smugly. In his modern life, his only hobby had been drawing comics, so he had some experience with illustration.

Although he was using a brush, his drawings were quite impressive, with clear lines that rivaled computer-generated designs.

"Your Highness, what has you so happy?" Lü Luo asked as she brought in his breakfast.

Since winter had arrived, the food had become even more monotonous. Breakfast consisted of two
flatbreads and a bowl of dough drop soup. However, this was also the season for hunting, so there was
some venison and wild fowl available in the market.
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"I've finally finished drawing the ship," Xiao Ming said happily, taking the flatbread and letting his fingers brush against Lü Luo's hand.

Lü Luo shot him a reproachful look but was already accustomed to Xiao Ming's playful nature.

Looking at the dozen or so drawings on the desk, Lü Luo stuck out her tongue. "Your Highness is truly amazing. If it were me, I wouldn't know how many years it would take to draw so many."

Xiao Ming was in high spirits. With the drawings complete, it was time to get Zhang Liang started on the project.

He believed that in terms of shipbuilding technology, the Great Yu Empire wasn't lagging behind at this stage—what was lacking was innovative thinking and advanced techniques.

"It's not that hard. If you're free at night, come here, and I'll teach you. I guarantee you'll improve quickly," Xiao Ming said between bites of his flatbread.

Lü Luo blushed. "Your Highness is just trying to tease me again. I won't fall for it." With that, she pouted and left Xiao Ming's chambers.

Xiao Ming chuckled mischievously as he watched Lü Luo leave. After quickly finishing his breakfast, he took the drawings and headed to the Engineering Department.
In the depths of winter, there wasn't much else to do, so he spent his time shuttling between the Engineering Department and the prince's residence.
Moreover, he wanted to take advantage of the agricultural off-season to establish some simple workshops, which would be ready for use by spring.
"Your Highness," Chen Qi greeted Xiao Ming with a bow.
Unlike other places, the Engineering Department was bustling with activity. Craftsmen and servants were hard at work, and in the backyard, two blast furnaces over three meters tall had been erected.
On either side of the furnaces were earthen steps for loading materials, and at the base, each furnace was connected to a large bellows for air supply.
In front of the furnaces were piles of black, unremarkable objects—not coal, but coke that Xiao Ming had instructed Chen Qi to produce.
"How's the iron smelting experiment going?" Xiao Ming asked.

The mature techniques Xiao Ming had taught Chen	Qi had saved	him a l	lot of tria	l and error	, but the
process still required hands-on experimentation.					

"Your Highness, the initial attempts at producing coke weren't successful. The iron produced had too many impurities. Later, we adjusted the temperature and sealed the carbon more tightly, which finally yielded qualified coke. We also had to adjust the airflow and coke quantity multiple times during smelting to produce qualified wrought iron that met the necessary standards for forging," Chen Qi explained.

Since Xiao Ming had instructed him to use blast furnaces for iron smelting, Chen Qi had thrown himself into the task. Now, he had finally succeeded in producing wrought iron.

Xiao Ming nodded. "Good. Once the crucibles are ready, this wrought iron can be refined into qualified steel, and the strength of our machine tools and cutting tools will also improve."

"We're just waiting for Steward Qian to return. It's been over twenty days since he left. Why hasn't he come back yet?" Chen Qi couldn't help but feel anxious.

Xiao Ming frowned. He was also worried. With the roads blocked by snow and bandits on the loose, he hoped nothing had gone wrong.

Glancing at the wrought iron ingots, Xiao Ming said, "Don't worry. There's plenty of work to do at the Engineering Department. You can focus on other tasks for now. By the way, how have Zhang Liang and the others been performing recently?"

Chen Qi seemed to have forgotten about Zhang Liang and his men. Only when Xiao Ming brought them up did he say, "Your Highness, they've been doing manual labor and have been quite diligent. Why do you ask?"
Xiao Ming held up the drawings. "For this. The Engineering Department will likely need to produce some parts for it."
"Your Highness, may I take a look?" Chen Qi immediately became eager.
Knowing Chen Qi's nature, Xiao Ming didn't tease him and handed over the drawings.
"Is this a ship?" Chen Qi glanced at the drawings and exclaimed, "But I've never seen a ship like this before."
"This type of ship is originally called a galleon. After some modifications by me, I now call it the Qingzhou ship," Xiao Ming explained.
Chen Qi flipped through the drawings and then handed them back, scratching his head. "Your Highness, I'm afraid I can't help with shipbuilding. I've never studied it before."
"I'm not asking you to build the ship, just to help produce some parts," Xiao Ming said with a laugh.

Chen Qi breathed a sigh of relief and then remembered, "That's why Your Highness is looking for Zhang Liang. His family used to run a shipyard, didn't they? I'll go fetch him right away."
A short while later, Chen Qi brought Zhang Liang over. Zhang Liang bowed and said, "This old servant greets Your Highness."
"At ease," Xiao Ming said, helping Zhang Liang up. "I called you here because I have a task for you. It's a waste to have your family doing manual labor. Here, take a look at this and tell me if you can build it."
Zhang Liang was stunned. He took the drawings from Xiao Ming and, after a quick glance, froze in place After a long moment, he frantically flipped through each page. By the end, his hands were trembling uncontrollably.
"Your Highness, where did you get these drawings? I've never heard of such a ship, but based on my experience, this vessel is perfectly suited for sea voyages," Zhang Liang said.
Xiao Ming nodded. This single comment showed that Zhang Liang still had some expertise, as he could recognize the technical sophistication of the design. "Don't ask about that. I just want to know if you're willing to build this ship for me."
"Willing!" Zhang Liang replied without hesitation. "It's better than spending my days surrounded by ore and coal slag."
"Good. In that case, I'll restore your shipyard. However, from now on, it will be state-owned and have no connection to you. Are you willing?"

Zhang Liang sighed. "This old servant is a criminal and a slave. I only wish to make use of my lifelong knowledge."
"Very well. In a few days, you and your family can return to the shipyard. I'll handle the matter with the Qin family," Xiao Ming said.
Zhang Liang's former shipyard had been seized by the Qin family, and Xiao Ming would need to reclaim it. With this matter settled and no other urgent tasks at the Machinery Department, Xiao Ming returned to the prince's residence.
At the same time, the Qin family's merchant ship slowly docked at the port of Chang'an, the capital of the Great Yu Empire.
Li San disembarked and stared in awe at the majestic and imposing city of Chang'an in the distance.