Civilization 226

Chapter 226: The Development of Technology, Part Three

Xiulote walked through the bustling courtyard, heading northwest towards the Divine Revelation Place, where the armor equipment research area was located. The person in charge here was Matelar, a master armor craftsman from the Holy City. Besides being skilled in cotton armor, he was especially good with leather armor.

The cotton armor and leather armor techniques of the Mexica people had matured considerably. Every young samurai was equipped with an Ichiqavihpili, which was a vest form of light cotton armor. Warriors above the second level were equipped with different ranks of Telaviztli, that is, brightly colored full-body cotton armor. And the more elite veteran warriors would transition from cotton armor to cotton armor inlaid with leather or to sleeveless, tied leather armor.

The widespread popularity of cotton armor was primarily because of its low production costs. Central America was one of the main origins of cotton, possessing an extremely rich variety of cotton resources, and the history of the America's ancestors domesticating cotton was shockingly long. In this era, the upland cotton planted by the various parts of Mexico was the world's highest-yielding variety, far surpassing the cotton of India during the same period.

After the Spaniards arrived in Mexico and Yucatan, they discovered the superiority of the upland cotton's yield and would, in turn, bring it back to Eurasia, rapidly spreading it around, replacing the original Eurasian cotton.

Xiulote knew that in later centuries, Mexico's upland cotton would account for 90% of the world's cotton cultivation yield. In fact, since the American civilization lacked cattle and sheep, and was short on leather and wool, it went to great lengths in plant domestication. Corn, pumpkin, potatoes, sweet potatoes, peanuts, strawberries, cassava, green beans, tomatoes, avocados, chili peppers, passion fruit, pineapple, pitaya, cacao, sunflowers, tobacco, rubber, and high-yielding upland cotton were all outstanding contributions from the ancient American civilization to the world, thoroughly changing human life. It was another form of great civilization.

When Xiulote stepped into the armor workshop, the fragrance of cotton fat greeted him, making him feel light and relaxed.

The young man looked around. The craftsmen placed several jin of cotton into molds, soaking and repeatedly pressing them to form thick sheets, that is, the cotton sheets. At this moment, the middle of the workshop was filled with cotton sheets being aired out. If these cotton sheets did not swell after being exposed to the sun for a day, they were considered successfully made and could be used to make cotton armor.

In a corner of the workshop, armor master Matelar sat next to a large tank, tanning a nearly four-meter-long crocodile skin. This was fresh material that the warriors had just brought over from Heavenly Fire Island, requesting the armor master to help make it into leather armor. Of course, since there were no thick cowhides available, the leather armor was still made by attaching leather to the surface of a cotton armor.

Compared to cotton, leather materials were difficult to come by. The Mexica's only sources of leather were the scarce wild deer, coyotes, jaguars, and the massive crocodiles. Seasoned warriors would enter the forests to try ambushing deer, chasing tigers and wolves, and hunting large crocodiles, in order to make their own treasured and tough leather armor. As such, leather armor became a symbol of high-ranking warriors.

Xiulote walked over quickly and looked carefully. The crocodile skin had completed the soaking and washing process, becoming soft and clean. The protein fibers were fully stretched and expanded, and it was now placed into the tanning leather tank. The tank was filled with small pieces of chopped bark, and a layer of fat floated on the surface of the water.

The young man sniffed the slightly pungent smell, also detecting the unique fragrance of pine trees. He then looked at the texture of the bark; indeed, it was tanning-rich pine bark, and possibly some fir bark

too. The tanning juice from the bark would flow into the water, then penetrate into the skin and combine with the collagen, completely denaturing the protein structure and turning the skin into leather, making it tough and non-rotting.

Matelar stirred the crocodile skin in the tank with force, as if he were taming a large, fierce beast. This stirring process had to continue for two quarters every day. After several weeks, the skin would soften and could be taken out again for beating and kneading. After tanning was completed, it would be rinsed, stretched, and dried on a wooden frame. Finally, selective grinding, oiling, polishing, and softening would be done until it was completely shaped.

A soft and tough jaguar skin served as a sitting mat where Xiulote conducted business while seated on the floor in a grand hall. Jaguar Nobility warriors also favored draping themselves with jaguar skins or making leather armor of it to showcase their bravery and strength.

Seeing the prince arrive, Matelar knelt respectfully to give a salute. He was probably over forty years old, ordinary-looking, with a diagonal claw mark on his face that looked quite ferocious, a remnant of his youthful hunts for tigers and leopards. Looking at his thick, heavily calloused fingers, his movements were agile and strong, clearly marking him as a skilled hunter.

Xiulote immediately stepped forward two steps, smiling as he lifted the armor master.

Matelar was an old man of the Holy City, well-known to the young man since childhood. He was a senior civilian warrior, adept at hunting and skilled in armor making, who eventually retired from his warrior role to become an armor master, enjoying a high status in the Holy City’s military. The young man’s leather armor and deer leather boots were made at his request.

Matelar was a fully trustworthy member of the direct lineage. This time, to set up the Divine Revelation Place, Xiulote specially invited the armor master from the Holy City to take charge of the armor research affairs.

"Matelar, have you finished the armor trial I asked you to do? How's the defense? And how much labor did it cost?" Xiulote asked earnestly.

The master armor craftsman gave a gentle smile and handed over his work to the apprentice. His temperament was much better than that of Kushinji, and now he personally walked over to the neatly arranged row of armor on the wooden rack, providing a detailed explanation to His Highness.

"Your Highness, please look. These are the cloth iron armor, paper armor, rattan armor, and finally the rattan shield that I crafted myself, all as you requested."

Xiulote nodded slightly, his eyes filled with anticipation. Cotton armor could effectively defend against obsidian weapons and arrows but was weaker against bronze weapons, unable to withstand the piercing of copper spears. The young man then searched his memory for various equipment, attempting to have the master armor craftsman replicate them.

"First, this cloth iron armor. Following Your Highness's suggestion, I have affixed neatly arranged copper sheets inside, then filled it with cotton and leather. To save on copper, the copper nails and copper sheets are concentrated at the chest and shoulders. Each suit of cloth iron armor uses between twenty to thirty catties of copper and, along with the weight of the cotton armor itself, weighs thirty to forty catties.

"It can completely defend against the cutting of war clubs, though it is slightly weaker against blunt strikes. Regarding bows and arrows, Tlaxcalan bows can't pierce it at all, and Mexica longbows need to

be at a close range to penetrate. Against the copper axes and copper spears of the Tarasco people, the defense of this cloth iron armor is astonishing."

Speaking this far, Matelar praised sincerely, his facial scars trembling with amazement.

"However, as previously mentioned, a suit of cloth iron armor requires at least over twenty catties of copper and more than ten catties of cotton. It requires specialized craftsmen to shape the copper sheets and nails, then attach them to the cotton armor. The production cost and manpower are very high. This type of armor is also exceedingly heavy, only elite samurai can endure it for long periods."

As he spoke, Matelar brought over a test Tarasco bronze axe, chopping several times, the cloth iron armor showed no fatal damage. He then switched to a copper spear, thrusting at it numerous times head-on, with the copper plates under the cotton simply sliding off. Only attacks aimed at the sides could be lethal, and those areas would normally be protected by weapons and shields.

Touching the smooth copper nails on the surface of the cloth armor and feeling the hard copper plates underneath, Xiulote nodded his head in satisfaction, lost in thought.

In this era, due to its excellent performance and low cost, cloth armor had already begun to spread throughout the Ming Dynasty. The elite Ming border army was equipped with a large amount of cloth iron armor, which could even weigh between forty to fifty catties, becoming a new type of heavy armor.

Later, towards the end of the Ming and start of the Qing era, the Spaniards brought Mexica cotton to the world, and the Celestial Empire’s cotton output would greatly increase, thereby making cloth armor the standard equipment for the regular army. The proportion of iron armor during the Ming and Qing period would surpass that of any previous dynasty, often having tens of thousands of iron-armored troops. The later Jurchen main force would all wear armor, with most equipped with the inexpensive cloth iron armor.

Cloth iron armor's defense against traditional swords and knives was astonishing. Compared to plate armor and stab armor, it was much simpler and cheaper to produce and its defensive capabilities were not reduced by much. Additionally, it was particularly easy to maintain and repair, allowing it to be widely distributed within the regular army of the Eastern Empire. Meanwhile, the cotton stuffing could effectively defend against the emerging firearms, being somewhat the most basic bulletproof vest.

Afterwards, Xiulote shook his head with a wry smile. This equipment, cheap and effective for the Ming, was an exceptionally expensive and advanced form of heavy armor for the Mexica Alliance and various parts of Central America—truly invincible!

A suit of cloth iron armor required twenty to thirty catties of bronze, enough to make fifty spearheads weighing five taels each, providing weaponry to fifty village militiamen that could threaten samurai. However, the Alliance did not produce copper and could not afford the cost of hundreds of heavy copper armors. Moreover, the production of cloth iron armor consumed a significant amount of labor.

More critically, this technology skipped over the difficulties and extreme weight issues of forging full bronze armor. Once it fell into the hands of the Tarascans, breaking through this barrier would truly arm the enemies from the West. Their strength would increase exponentially, completely changing the military balance between the two sides.

Thinking of thousands of cloth iron armor-clad samurai, Xiulote shivered and shook his head again. After pondering for a moment, he had Matelar put away the cloth iron armors and temporarily sealed the production technique. Only when the Alliance ventured westward, obtaining a stable source of copper mines, would the cloth iron armor begin to be equipped, bringing surprise and profound despair to the next war target.

Next, the young man turned his gaze to the cloth paper armor, this new yet ancient inexpensive equipment, showing a sincere smile on his face.