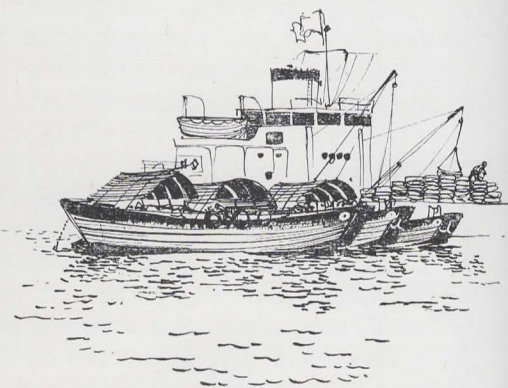


# BUILDING A JUNK



Junks are built without blueprints using techniques handed down from father to son and only minimum "chips" tools. Note hand hewn ribs (lower right). Background is Singapore's Alexandra Canal.



Hand fashioning stern to fit planking contour. Note rib installation.



**WITHOUT PLANS,  
BY HAND  
AND WITH ONLY MINIMUM TOOLS,  
CRAFTSMEN TURN OUT ASIA'S  
UBIQUITOUS WORK BOATS**

Junks, you find them all over East Asia—from the Timor Sea to the Yellow Sea; from the Bay of Bengal to the Coral Sea and beyond. They are a part of local color. For no matter how little a person travels, he never fails to connect junks with the exotic lands of tea, sandalwood and rice. How did junks get the name? Where did they come from? How are they built?

The word junk applies to every Chinese style ship, whether sail, powered or both. Its derivation is probably the Fukinese dialect character 'Ch'un (船). Adopted by the Indonesians as "Djong," it was eventually picked up by the Dutch as "Jonk." East Indiamen crews brought the word back to Europe where it was further corrupted to its present form.

No one knows exactly where they came from. But records from the Yuan Dynasty (early 13th century) tell of these incredible vessels visiting Sumatra, India, and even



*Kayu gam logs are hand sawn along grain using push-pull type saw. Water is used to lubricate saw drips continuously from the white can atop log.*





as far as the Persian Gulf. But en mass, junk trading did not actually start until AD 1407. They have been the hallmark of East Asian ports ever since.

The ubiquitous junks are by far Asia's work-horses. They are found at sea, on rivers, and in harbors. In most cases they are family affairs, a way of life for countless people who are born, raised, marry and die within the narrow confines of their sturdy hulls.

Off Singapore's Kim Seng Road, by the banks of the Singapore River, is a small shipyard (we use the term here lightly) that builds the type junks seen in the city's busy harbor.

Here, six men can put together a 50- to 60-ton junk in about three months' time. It will last about 50 years, maybe longer, and costs in the region of M\$6,000. The material used is mainly the native timber, Kayu Balau, Kayu Chengal and Kayu Giam (Kayu is the Malay word for wood). Balau and Chengal are grown all over Malaya, while Giam is found mainly on the East Coast.

Incredible as it may seem, there are no blueprints. Construction techniques are handed down from father to son. Apprenticeship starts in boyhood. A son playing around the yard learns by watching his father. Then in his early teens he takes on light, simple work and learning by observation the more complicated tasks. On reaching manhood, he is ready for full "journeymanship," but gets it only after satisfying his father's quite exacting requirements.

All shipbuilding skills are performed with the minimum number of "ship's" gear. Strakes are cut from the logs by hand to insure the straight graining needed for maximum strength. A power saw would be impractical for this kind of operation, particularly when the log is curved. Though a laborious process, the cost is only about M\$0.60 cents a board foot.

Ribs are shaped with an axe to the proper contour. Strakes, however, are shaped by heating. The skilled eye of the master junk builder knows when they are properly



*Fitting the strakes.*



bent. This prevents their splitting when being fastened to the ribs.

Securing strakes to the ribs is an exercise in patience. They are fitted, clamped in place, and hand drilled. The craftsman drills each hole to three successively smaller diameters. He uses an auger and bit for the diameter, follows this with a hand brace to drill the next smaller one and finally drills the smallest and inboard diameter with an ancient Chinese fiddle drill. After a hole is drilled, a metal peg is driven home.

The metal pegs are quite interesting. The more traditional type are made from iron and have a barbed end. More modern ones are made of an aluminum alloy and are not barbed. As might be expected there are differences in opinion as to the advantages of each. Some owners insist on iron. Others are equally insistent on aluminum. It's a matter of personal taste, we're told. But after all, a junk is a very personal thing.

According to a good Chinese friend, "the methods employed here are much the same as in other yards throughout the Far East." There are, to be sure, larger, more modern establishments turning out junks than the little one on Singapore's Kim Seng Road. But in spite of size or modernity, the personal touch of the master craftsman is much in evidence. And rightfully so, for when a junk is launched, she takes on a personality all her own. The devils are driven from her so that only the good spirits follow her all her days. According to Chinese tradition, these good spirits enable her to see through the eyes painted on bow, using them to avoid dangers and troubled waters ahead.



*Ancient Chinese fiddle drill in operation.*



*Iron pegs with barbed ends or aluminum pegs are used to fasten strakes to ribs.*



*Almost ready for launching.*