

Sand Casting

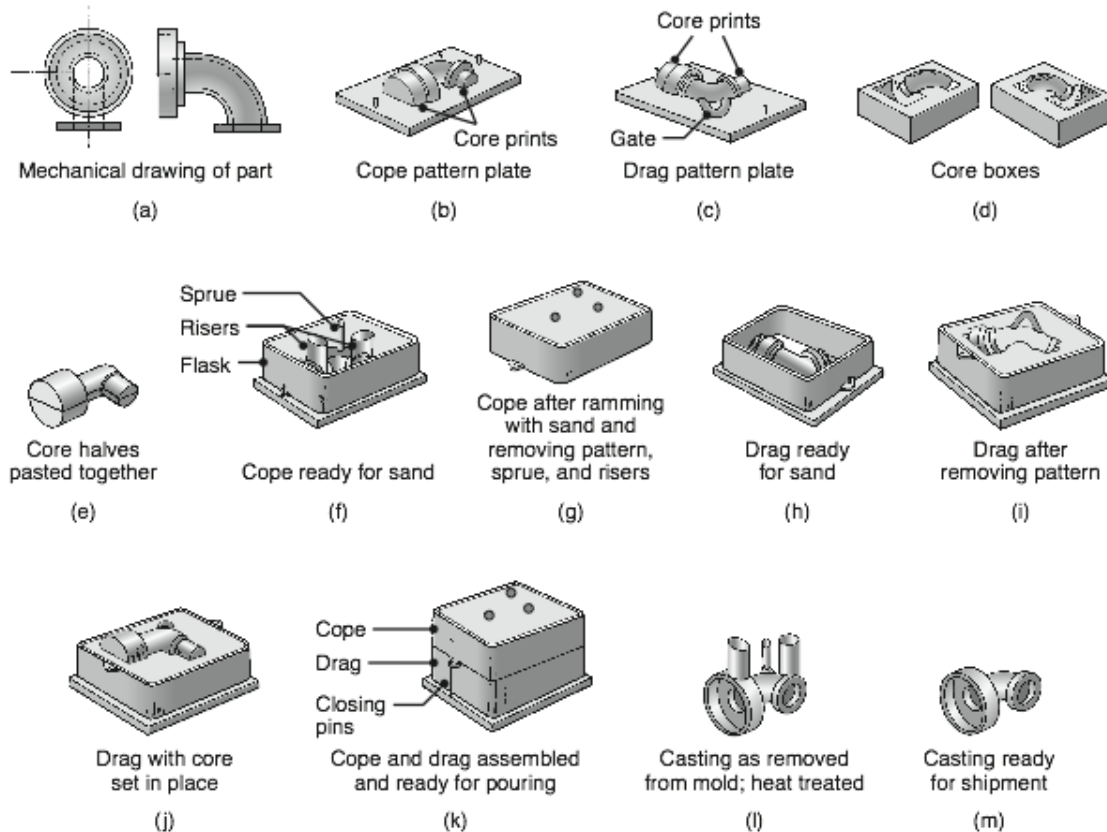


FIGURE 5.16 Schematic illustration of the sequence of operations in sand casting. (a) A mechanical drawing of the part, used to create patterns. (b-c) Patterns mounted on plates equipped with pins for alignment. Note the presence of core prints designed to hold the core in place. (d-e) Core boxes produce core halves, which are pasted together. The cores will be used to produce the hollow area of the part shown in (a). (f) The cope half of the mold is assembled by securing the cope pattern plate to the flask with aligning pins, and attaching inserts to form the sprue and risers. (g) The flask is rammed with sand and the plate and inserts are removed. (h) The drag half is produced in a similar manner. (j) The core is set in place within the drag cavity. (k) The mold is closed by placing the cope on top of the drag and securing the assembly with pins. (l) After the metal solidifies, the casting is removed from the mold. (m) The sprue and risers are cut off and recycled, and the casting is cleaned, inspected, and heat treated (when necessary). *Source:* Courtesy of Steel Founders' Society of America.