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Yarn Path on a Mold for Double Sheet Bend Knotter

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Abstract: Knot strength is very important in processing ropes than other textile products. Thus double sheet bends are usually used in rope mills, because their knots are small and strong in order to tie two threads of yarn. These knots have been made by manual operation. These mills, therefore, are demanding to be able to make these knots automatically in order to improve process efficiency.

In this study, we have developed a knotter which is able to form a double sheet bend by using a set of molds. First, we designed a path to carve tracks on the surface of the mold by using the Dowker notation. But this path was too complicated to thread yarn through the path easily. Furthermore, it is desired that the knotter can be carried by a worker in rope mills. We, therefore, have moved and/or composed paths in order to obtain the simpler path for double sheet bends. Finally, we have integrated these molds and instruments such as air cylinders and linear guide ways in order to make a double sheet bend knot automatically.

Key Words: [Double sheet bend](#), [Mold](#), [Yarn path](#), [Dowker notation](#)

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