

There is scarcely a raw material now-a-days which may not be transformed, through the humanlike agency of perfected machinery, into a certain finished product which constitutes an entirely novel application of the ingenuity of man to the supply of modern requirements. We perhaps see this more in the conversion of steel to a host of growing necessities than in that of any other material—a conversion which is astonishingly wide in its scope, because it renders possible the

Our Industries

No. XVI.—SPIRAL STEEL PIPE WORKS, WANGANUI.

use of steel in many devices for building construction, with concrete as a twin factor.

One of the most recent, and what may aptly

be termed revolutionary, practices adopted in New Zealand is the spiral pipe process, wherein mild steel, one eighth of an inch in thickness, takes the place of the more costly and unwieldy cast iron in the manufacture of water mains. This industry has flourished in the Australian Commowealth and in the United States of America for some twenty years past. The pipes in the two countries mentioned were for many years constructed with riveted longitudinal and circular seams and were coated with ordinary pitch or coal tar. These pipes were worked up to pressures of 60 bs. per square inch. Although many engineers objected to these wrought iron pipes, on the ground that the rivet heads formed a serious obstruction to the free flow

of the water when the main was worked to

its full theoretical capacity, yet it has been



amply demonstrated that, so far as the preservative coating of the pipe is concerned, there need no longer be any doubt as to the life of a steel main when efficiently coated

Yet another difficulty faced the manufacturers of steel water mains, viz., cost of manufacture. For mains of sizes of 15" diameter and above, steel mains could be made by the old method at a cost not exceeding that of cast iron, but for smaller pipes from

