

at such temperatures it might happen that fragments of granite, mica schist, &c. should escape fusion ; and such are stated, on good authority, to have been found in the midst of the lava of Vesuvius, Etna, and the Ponza Isles ; while limestone in a similar situation is found of that crystalline texture often observed in calcareous rocks which have undergone fusion.

The volume of melted rocks poured forth in a single short eruption of Vesuvius is considerable ; far greater during some of the long-continued periods of activity of the Icelandic volcanos ; enormous, if we contemplate the united effect of a whole chain of volcanos like those of South America. In 1737, the current of lava from Vesuvius which destroyed Torre del Greco, and ran into the sea, is supposed to have accumulated no less than 33,587,058 cubic feet (equal to a cube of above 322 feet by the side, or a cone of the same height and above 630 feet diameter at the base). In 1794, another current, which flowed also through the same ill-fated town, was calculated by Breislac, who saw the eruption, to equal 46,098,766 cubic feet.

Etna, which rises above 10,000 feet in height, and embraces a circumference of 180 miles, Dr. Daubeny assures us, is composed entirely of lavas, which appear to have been emitted above the surface of water, and not under pressure. “ In the structure of this mountain, every thing wears alike the character of vastness. The products of the eruptions of Vesuvius may be said almost to sink into insignificance, when compared with these ‘coulées,’ some of which are 4 or 5 miles in breadth, 15 in length, and from 50 to 100 feet in thickness ; and the change made on the coast by them is so considerable, that the natural boundaries between the sea and land seem almost to depend upon the movements of the volcano.” (*On Volcanos*, p. 203.) The great current of 1669, which destroyed Catania, is estimated by Borelli to contain 93,838,950 cubic feet.

But it is in the great eruptions of Iceland, as that of Skáptaa Jokul (in 1783), that the effect of the continued