

Engineering of Glacial Deposits

Preface
Author

1 Introduction

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Glaciation is a global phenomenon, occurring whenever ice sheets or mountain glaciers cover large areas of land and sea. It is a process of climate change involving the melting and accumulation of snow and ice, which occurs because of changes in atmospheric circulation, insolation, sea level, or temperature due to variations in the climate. It involves a complex interaction of geological processes including the formation of landforms, ice, and water. Between 10,000 and 15,000 years ago, there was a major glacial period known as the last ice age, which ended about 10,000 years ago.

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Glacial soils are the most variable soil type, ranging from dry, loamy soils to dense, clayey soils. They are often found in areas where glacial activity has occurred, such as in the Arctic and Antarctic regions, as well as in mountainous areas where glacial processes have been active. They are typically found in areas where glacial activity has occurred, such as in the Arctic and Antarctic regions, as well as in mountainous areas where glacial processes have been active.

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The basic principles of glacial soils are that they are derived from the weathering of bedrock, which is a process that involves the breakdown of minerals into smaller particles. This process is called glacial weathering, and it is caused by the action of ice, meltwater, and wind. Glacial weathering can occur in various ways, such as through the action of meltwater, which can erode the surface of the soil, or through the action of wind, which can blow away loose particles. Glacial weathering can also occur through the action of ice, which can melt and then freeze again, creating a process called冻融作用 (frozen-thawed action).

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