

ABSTRACT

Disclosed are a prestress string annular support system, and a deformation control method thereof. The system comprises an annular support constructed in a foundation pit and strings arranged along diameter directions of the annular support; a plurality of strings are provided; the included angle between every two adjacent strings is equal; a prestress applying device is arranged at at least one of intersection points of the strings or extension lines thereof and the annular support. According to the deformation control method, when the foundation pit deforms in a certain direction or in a certain relative direction and then the annular support deforms in the same direction, prestress applied onto the annular support is adjusted by means of the prestress applying device corresponding to the string perpendicular to the deformation direction, so that deformation of the annular support is controlled. According to the present invention, control can be conducted when the prestress string annular support system deforms due to deformation of the foundation pit, so as to protect facilities around the foundation pit.