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(81) 指定国 (除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW。

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(54) Title: PRESTRESS STRING ANNULAR SUPPORT SYSTEM, AND DEFORMATION CONTROL METHOD THEREOF

(54) 发明名称: 预应力张弦圆环支撑体系及其变形控制方法

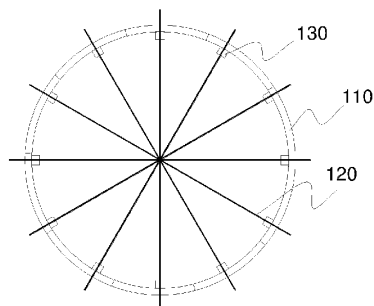


图 2

(57) 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.

(57) 摘要: 本发明公开了一种预应力张弦圆环支撑体系及其变形控制方法, 该体系包括施工在基坑内的圆环支撑, 以及沿所述圆环支撑的直径方向设置的张弦, 所述张弦为多条, 相邻两条所述张弦之间的夹角相同, 所述张弦或者其延长线与所述圆环支撑的至少一个相交点设置有预应力施加装置。该变形控制方法, 当基坑在某一方向或者某相对方向发生变形导致圆环支撑在相同方向发生变形时, 通过垂直于变形方向的所述张弦对应的预应力施加装置调节施加在圆环支撑上的预应力, 以使圆环支撑的变形得到控制。本发明能够在基坑变形导致预应力张弦圆环支撑体系变形时进行控制, 以保护基坑周边设施。

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