

独立柱基桩埋管施工过程

Independent column pipe pile construction process

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场地概貌，已挖好的独立柱基基坑

Overview site has been dug pits the independent column Schicchi



地质概貌，积水现象表明该地质条件属于密实型碳质页岩。

Geological landscape, water belongs to the phenomenon indicates that the geological conditions of dense type carbon shale.



作完垫层 After completing cushion



准备工作 dead work



开始做固定架 Holder started



管道材料：PE80 塑料管 De25X2.3

Pipe Material: PE80 plastic tube De25X2.3



盘管施工 Coil pipe Construction

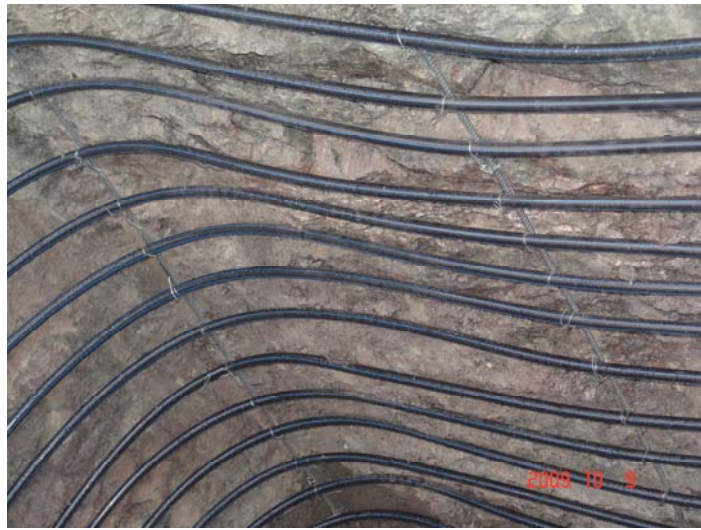




初步成型 Initial shape



固定节点 Fixed Node



成型作压力试验 Forming to pressure test





试压完毕、等待浇筑 Pressure test is completed, wait for pouring



保压浇筑 Packing pouring system





独立柱基砖模施工 Independent column base brick mold construction



放线 paying off



砌筑 Masonry



成型 Shanping



工地局部场景 The scene of building site in a part



挖孔桩埋管

Drilled pile pipe

挖孔桩也是建筑基础采用较多的基础形式是之一，具有局部下沉式施工的特点，可根据地质条件变化随时调整基础施工深度，简单易操作，在劳动力较便宜的地方被大量采用。

利用挖孔桩做地源热泵系统也有较好的经济性和可操作性。在设计时将结构所需直径做调整，直径放大 100mm 用作敷设塑料管道即可满足要求，系统的热量平衡和所需埋管的数量有一定的数量关系，因而在桩孔数一定时，其深度要求和埋管数量要做一些平衡调整。

Digging holes in the construction of pile foundation with more basic form of one of sink-style construction with local characteristics, geological conditions can change at any time to adjust the depth of foundation construction, simple and easy to operate, cheaper places in the labor force has been extensively used.

The use of dug pile to do ground-source heat pump system has a good economy and maneuverability. Structure in the design will be adjusted to fit the required diameter, larger 100mm diameter plastic pipe can be used to meet the requirements of the laying of the system's heat balance and the required number of pipe have a certain amount, and so, a certain number of holes in the pile, its depth requirements and the number of pipe doing some balance adjustment.

挖孔下沉式施工阶段 Digging hole sink-style construction phase





孔桩施工完成 Pile Construction completed



孔桩盘管施工过程 Pile coil construction process



孔桩盘管施工完成 Pile coil construction completed



加压试验 pressure testing



结构设置钢筋笼 steel reinforcement cage





挖孔桩浇筑完成、初步成型 Drilled pile pouring the completion of the initial shape



换热桩埋管

Exchanging Heat pipe pile

从理论上讲，只要结构基础桩的设计深度满足换热需求的深度，完全利用结构基础桩是可能的，但实际设计中，基础桩施工由于地质原因、往往需要做一些调整，使得地下换热量的数量不满足设计要求，因此就需要一些单纯换热的换热桩体作为补充。换热桩和挖孔桩的施工方法一样，只是其设计直径要大一些，一般直径控制在 1.5m-2m 之间。

In theory, as long as the structural basis for the design of pile depth to meet the needs of the depth of heat exchangers, take full advantage of the structure foundation pile is possible, but the actual design, the foundation pile construction of geological reasons, often need to do some adjustments to make underground heat transfer The number does not meet the design requirements, and therefore need some simple heat transfer in heat exchanger pile as a supplement. Heat exchanger piles and piles of construction digging holes the same way as, but are designed to be larger in diameter, the general diameter of control in between 1.5m-2m.

换热桩在盘管施工 Construction of Pile in coil heat exchanger



具有较大的操作空间 Have greater room for maneuver



4 米深盘管施工成型 Construction of 4 meters deep coil forming



6 米深盘管施工成型 Construction of the 6 m deep coil forming



换热桩浇筑完成 The completion of heat pouring pile





干管将各盘管连接形成换热环路
Main pipe will be connected to form each coil loop heat exchanger





建筑结构基础埋管做地源热泵系统需要的是多专业的配合和协作，通过合作我们可将建筑节能有效性贯穿在我们的工作中。我们国家正在承受能源需求快速扩张的压力，资源匮乏是我国发展进程中面临的重要问题，节能降耗是我国的基本国策，建筑节能是我们的责任，希望大家共同参与，为我国的节能工作做出应有的贡献。