盐碱地生态修复与绿化技术的应用实践

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摘　要： 天津绿茵景观生态建设股份有限公司在盐碱地生态修复技术方面，主要围绕着排盐抑盐、改土沃土和抗性植物的筛选利用三个方面开展工作，目前已具有原位立体隔盐绿化技术、多维暗管快速排盐技术、光伏竖井快速排盐技术、植物根际微域改良技术、植物组合配置技术等多项技术，并依托内蒙古“改盐增草（饲）兴牧”农田示范项目、津南区八里台造林绿化工程、天津市滨海新区“双城之间”绿色森林屏障 EPC 项目、黄骅市黄北排干河道绿化项目等工程实践中综合利用这些技术，对盐碱地进行针对性的治理，取得良好的效果。公司目前的研究主要集中在三个方向：第一个方向是新型合成隔盐材料的应用与实践。针对盐碱地改良和治理，与高校合作开发新型的隔盐、排水材料，利用具有微纳米结构的无纺布，能够引导水定向流动，实现隔盐、排水的功能，效果非常明显。新材料的研发和应用，可以大量降低农田或者是盐碱地工程的建设成本；第二个方向是盐碱土滴灌精准洗盐技术的研究，在滨海盐碱土的场景下，应用滴灌洗盐技术，减少原土洗盐的用水量；通过滴灌洗盐，可以对植物根生区盐分进行精确淋洗和抑制，相比大水漫灌，更加集约化，可节省超过 30%的用水成本；第三个方向是新型盐碱土结构改良剂配方研究，通过新型土壤结构改良剂，可以解决滨海盐碱土黏重、通气性差等结构问题，为土壤改良提供一种简便可行的技术解决方案。

关键词： 盐碱地；生态修复；绿化技术；工程应用

Application practice of saline-alkali land ecological restoration and greening technology

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Abstract: Tianjin Luyin Landscape Ecological Construction Co., Ltd. in terms of saline-alkali land ecological restoration technology, mainly around salt suppression and salt discharge, soil conversion fertile soil and the screening and utilization of resistant plants three aspects of work. At present, there are many technologies such as three-dimensional salt insulation greening technology, multi-dimensional dark pipe rapid salt discharge technology, photovoltaic shaft rapid salt discharge technology, plant rhizosphere microdomain improvement technology, plant combination configuration technology and other technologies. We rely on Inner Mongolia "salt to increase grass (feed) rejuvenation and grazing" farmland demonstration project, the Bali platform of Jinnan District , these technologies are comprehensively used in engineering practices such as the "Between Two Cities" Green Forest

Barrier EPC Project in Tianjin Binhai New Area and the Huangbei Drainage River Greening Project in Huanghua City to carry out targeted treatment of saline-alkali land and achieve good results. The company's current research mainly focuses on three directions. The first direction is the application and practice of new synthetic salt barrier materials. In view of the improvement and treatment of saline-alkali land, we cooperate with universities to develop new salt insulation and salt discharge materials, using micro-nano structure non-woven fabrics, which can guide the directional flow of water, can achieve salt barrier, salt isolation, cut off soil capillaries, the effect is obvious. The development and application of new materials can reduce the construction cost of farmland or saline -alkali land projects.

The second direction is the research of precision salt washing technology of drip irrigation of saline-alkali soil, which applies drip irrigation salt technology to reduce the water consumption of washing salt in the original soil in the scene of coastal saline-alkali soil; By drip irrigation, the salt in the plant root area can be accurately rinsed and inhibited, which is more intensive than flood irrigation, and can save more than 30% of water costs; The third direction is the research on the formula of new saline-alkali soil structure improver, combined with the maintenance needs, as a soil structure amendment, which can solve the structural problems of coastal saline-alkali soil such as clay weight and poor aeration, and provide a simple and feasible technical solution for soil improvement.

Key words: Saline-alkali land; Ecological restoration; Greening technology; Engineering applications