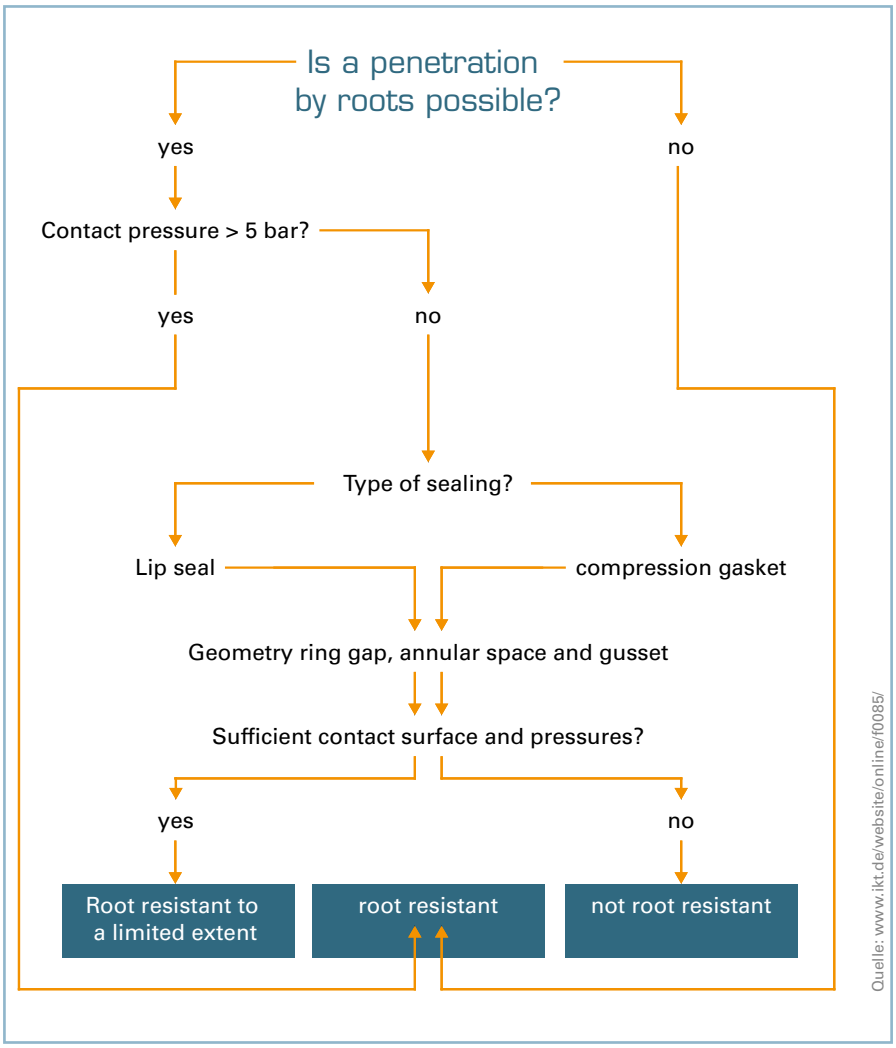
REINOGRIP and root penetration

REINOGRIP ROOT RESISTANT also without internal pressure

Penetration by roots

Root penetration is a biological process which can occur at supply and disposal lines where and when roots have sufficient space to grow within pipe connections and pipelines. During its growth the root in the soil is deflected into the direction with the lowest pressure. On its search for humidity and nutrients it grows in an environment with the most flexible surrounding material.
Investigations have shown that by the growth of roots mechanical compressive stresses occur in radial direction, which can be up to 5.9 bar within a few hours. A maximum pressure of approx. 5 bar was observed over longer periods of time. The direction of root growth and the formation of the whole root network are influenced by different factors, like e.g. soil type, compaction differences and level of oxygen. These factors can vary temporarily and spatially in the environment of pipes and their connections.
As a consequence root penetration can be counteracted at pipe connections by already preventing root penetration in the connection area, the contact pressure of the sealing exceeds the expected root pressure and/or the geometry of the sealing aggravates root penetration. (Please see illustration below)
Construction site investigations and laboratory tests underline in particular the influence of the pipe environment, e.g. the properties of the surrounding bedding material as well as the geometry of the pipe connection and the associated or denied growth paths on root resistance. In addition, adhesion-repellent surfaces reduce the risk of ingrowth.

Source:
www.ikt.de/website/online/f0085



Quelle: www.ikt.de/website/online/f0085/

REINOGRIP

The surfaces of the REINOGRIP connections as well as the pipes consist mainly of plastic material which can be regarded as adhesion-repellent. When the pipe ends are plugged in, the annular gaps at the coupling opening are very narrow and in addition strongly or even completely reduced by the dirt repellent profile ring. The sealing element of REINOGRIP is a lip seal, the contact pressure of which already exceeds 5 bar when plugged in even without internal pressure. Therefore, root ingrowth into the connection is not to be expected. It is therefore considered to be root resistant.

Soils with low pores cannot be rooted through and thus additionally prevent root growth. The use of low-pore filling materials such as liquid soil in the area of the plug connections effectively and initially prevents root formation there.

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