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“CLEANER PRODUCTION TOWARDS A SUSTAINABLE TRANSITION”

Multi-Infra Curbs – New Model for Urban Infrastructure

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Abstract

Active now for over 20 years in the civil construction market we have always been aware of an enormous material waste which has generated large amounts of debris. Focusing on this fact we searched for alternative uses for this residue and began to study ways in which to incorporate the debris as a recycled aggregate in the concrete used to fabricate curbs and gutters for street right-of-ways, in accordance with NBR 15116/2004 regulations.

After we began to develop and analyze the utility of this new piece of urban equipment we realized the enormous potential of a novel way in which to use it. We are aware that curbs and gutters sit in parallel with all the utility networks necessary to supply our cities. It was along these lines that we developed a project for a curb able to double as a support for these distribution networks as presented below. We also became aware of the necessity for connections with the sewage system and concluded that these connections have to be adapted to the city's new necessities in improving the use of our water supply as well as that of collecting and reusing rainwater and reusable sewage waters, the concepts of which we will present here.

We are a private entity and as such always interested in the economic viability of our projects in order to attain to our objectives. To this end we have drafted a contract and cessation model for the distribution of these utilities, as well as processes for metering and charging for consumption, monitoring methods and distribution control, connectivity with consumer units and other innovations to be presented herein.

Keeping in mind that a solution such as this depends on high investments as well as the political will to implement them we are unable to present any effective projection of results of implementation. We do however believe that what we propose below will be easily understood and its benefits easily comprehended.

Keywords: curb, precast, cogeneration, water, reuse, rainwater