

## POLYGONAL $\mathcal{V}\mathcal{H}$ COMPLEXES

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**Abstract:** Ian Leary inquires whether a class of hyperbolic finitely presented groups are residually finite. We answer in the affirmative by giving a systematic version of a construction in his paper, which shows that the standard 2-complexes of these presentations have a  $\mathcal{V}\mathcal{H}$ -structure. This structure induces a splitting of these groups, which together with hyperbolicity, implies that these groups are residually finite.

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**Key words:** Residually finite group, hyperbolic group, nonpositively curved cube complex.