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Phuc Cong Nguyen* (pcnguyen@math.purdue.edu), Department of Mathematics, Purdue University, 150 N. University Street, West Lafayette, IN 47907, and **Igor E. Verbitsky** (igor@math.missouri.edu). *A class of non-linear equations with measure data.*

We give complete characterizations for the solvability of the following quasilinear and Hessian equations:

$$-\Delta_p u = u^q + \omega, \quad F_k[-u] = u^q + \omega, \quad u \geq 0,$$

on a bounded domain $\Omega \subset \mathbb{R}^n$, which give a complete answer to a problem posed by Bidaut-Veron. Here Δ_p is the p -Laplacian, $F_k[u]$ is the k -Hessian and ω is a nonnegative measurable function (or measure) on Ω . As a result, we obtain a characterization of removable singularities for the corresponding homogeneous equations. (Received August 16, 2006)