In this paper we study the Hausdorff dimension of a measure $\mu$ related to a positive weak solution, $u$, of a certain partial differential equation in $\Omega \cap N$ where $\Omega \subset \mathbb{C}$ is bounded simply connected domain and $N$ is neighborhood of $\partial \Omega$, $u$ has continuous boundary value 0 on $\partial \Omega$ and is a weak solution to

$$
\sum_{i,j=1}^{2} \frac{\partial}{\partial x_i} (f_{\eta_i \eta_j} (\nabla u(z)) u_{x_j}(z)) = 0 \text{ in } \Omega \cap N.
$$

Also $f(\eta)$, $\eta \in \mathbb{C}$ is homogeneous of degree $p$ and $\nabla f$ is $\delta-$monotone on $\mathbb{C}$ for some $\delta > 0$. Put $u \equiv 0$ in $N \setminus \Omega$. Then $\mu$ is the unique positive finite Borel measure $\mu$ with support in $\partial \Omega$ satisfying

$$
\int_{\mathbb{C}} \langle \nabla f(\nabla u(z)), \nabla \phi(z) \rangle dA = - \int_{\partial \Omega} \phi(z) d\mu
$$

for every $\phi \in C_{0}^{\infty}(N)$.

Our work generalizes work of Lewis and coauthors when the above PDE is the $p$ Laplacian (i.e, $f(\eta) = |\eta|^p$) and also for $p = 2$, the well known theorem of Makarov regarding the Hausdorff dimension of harmonic measure relative to a point in $\Omega$. (Received September 26, 2012)