[illegible] SH [illegible]

[illegible] 2-[illegible]

[illegible] SH [illegible] $z > 0$ [illegible]

[illegible]

Keywords- SH waves, regularizing algorithm, inverse problem, direct problem, porosity, porous medium.

[illegible] SH [illegible]

1. [illegible] $z > 0$ [illegible] SH [illegible] $b(z)$, [illegible] [6,7]

$$\rho_s(z)u_{tt} = \left(\mu(z)u_z\right)_z - \rho_l(z)b(z)(u_t - v_t), \tag{1}$$

$$\rho_l(z)v_{tt} = \rho_l(z)b(z)(u_t - v_t), \tag{2}$$

[illegible] u [illegible] v - [illegible] $\rho_s(z)$ [illegible] $\rho_l(z)$ [illegible] $t < 0$:

$$u|_{t=0} = u_t|_{t=0} = 0, \tag{3}$$

$$v|_{t=0} = v_t|_{t=0} = 0. \tag{4}$$

[illegible] $z = 0$ [illegible]

$$\mu u_z|_{z=0} = \delta(t), \tag{5}$$

[illegible] $\delta(t)$ - [illegible]

[illegible] (5) [illegible] $\rho_s(z)$, $\mu(z)$, [illegible] $\rho_l(z)$, $b(z)$ [illegible] $u(t,z), v(t,z)$ [illegible] (1) – (4). [illegible]

[illegible] SH [illegible].

[illegible] [5] [illegible]:

[illegible] 1. [illegible]

$$u\big|_{z=0} = \phi(t),$$

[illegible] $\mu(z)$ [illegible] (1) – (5) [illegible] $\rho_s(z), \rho_l(z), b(z)$).

3. [illegible] (1) – (5) [illegible]. [illegible] z [illegible] x:

$$x = \int_0^z \frac{d\xi}{c_t(\xi)},$$

[illegible] $c_t(z) = \sqrt{\dfrac{\mu(z)}{\rho_s(z)}}$ [illegible]

[illegible].

[illegible] x, [illegible]. [illegible]

$$\frac{\partial}{\partial z} = \frac{1}{c_t}\frac{\partial}{\partial x},$$

[illegible] (1), (2) [illegible]

$$u_{tt} - u_{xx} = (\ln\sigma)' u_x - b(x)\frac{\rho_l(x)}{\rho_s(x)}(u_t - v_t), \quad x > 0, \tag{6}$$

$$v_t = b(x)(u - v), \; x > 0, \tag{7}$$

$$u\big|_{t=0} = u_t\big|_{t=0} = 0, \tag{8}$$

$$v\big|_{t=0} = 0, \tag{9}$$

$$u_x\big|_{x=0} = \delta(t)/\sigma(0). \tag{10}$$

[illegible] (6) $\sigma(x) = \sqrt{\mu(x)\rho_s(x)}$ – [illegible], $\sigma > 0$. [illegible]

[illegible]

$$0 < \rho_{0s} \le \rho_s(x) \le \rho_{00s} < \infty,\ 0 < \rho_{0l} \le \rho_l(x) \le \rho_{00l} < \infty,\ 0 < b_0 \le b(x) \le b_{00} < \infty. \qquad (11)$$

[illegible] 1 [illegible] $[0,T]$ [illegible]

$$u\big|_{x=0} = \phi(t), \quad t \in [0,T], \qquad (12)$$

[illegible] $\sigma(x),\ x \in [0,T/2]$. [illegible] $\phi = A \ln \sigma,\ \sigma \in C^1[0,T/2]$ [illegible] $C^1[0,T/2]$ [illegible].

[illegible] [1, 2, 3-5], [illegible] $C^1[0,T]$, [illegible]

$$\Phi = \left\{ \phi \in C^1[0,T] : \phi(0) < 0,\ \|\psi\|^2_{L_2(0,T)} + \int_{-T/2}^{T/2}\int_{-T/2}^{T/2} \phi'(|t-s|)\psi(t)\psi(s)\,dt\,ds \ge 0,\ \forall \psi \in L_2(0,T) \right\},$$

[illegible] $C^1[0,T]$ [illegible] Φ.

4. [illegible] (6)–(10). [illegible] $\phi = A \ln \sigma$ [illegible] $\tilde{\phi} \in C^1[0,T],\ \|\phi - \tilde{\phi}\| \le \delta$. [illegible] $\phi \in \Phi$, [illegible] A^{-1} [illegible] σ [illegible] $\tilde{\sigma} = \exp\left[A^{-1}\tilde{\phi}\right]$. [illegible] $\tilde{\phi} \in C^1[0,T],\ \tilde{\phi}(0) < 0$, [illegible] $R : \tilde{\Phi} \to C^1[0,T/2],\ \tilde{\Phi} = \left\{\phi \in C^1[0,T] : \phi(0) < 0\right\}$, [illegible] $\tilde{\Phi}$ [1, 2, 3-5].

[illegible] $C^1[0,T/2]$ [illegible] $C^1[0,T]$, [illegible] $(A \ln \sigma)(0) = -1/\sigma(0) < 0$. [illegible] $\sigma \in C^1[0,T/2]$. [illegible] (6) – (10) [illegible]

$$u(x,t) = \theta(t-x)\, u_\Delta(x,t),$$

$$v(x,t) = \theta(t-x)\, v_\Delta(x,t).$$

[illegible] $\theta(t)$ - [illegible], u_Δ, v_Δ - [illegible] u, v [illegible] $\Delta=\{(x,t): 0\le x\le t\},\ u_\Delta, v_\Delta \in C^1(\Delta)$.

[illegible] (6) – (10) [illegible] $T>0$ [illegible] u, v [illegible] $\Delta(T)=\{(x,t): 0\le x\le t\le T-x\}$, [illegible] u, v, [illegible]

$$Lu \equiv u_{tt}-u_{xx}=(\ln\sigma)' u_x - b(x)\frac{\rho_l(x)}{\rho_s(x)}(u_t - v_t),\ 0<x<t<T-x, \tag{13}$$

$$v_t = b(x)(u-v),\ 0<x<t<T-x, \tag{14}$$

$$u_x\big|_{x=0}=0, \quad 0<t<T, \tag{15}$$

$$u(x,x)=-\frac{1}{\sqrt{\sigma(0)\sigma(x)}}e^{-\int_0^x \frac{b(y)\rho_l(y)}{2\rho_s(y)}dy},\quad 0\le x\le T/2, \tag{16}$$

$$v\big|_{t=0}=0,\ 0\le x\le T/2 \tag{17}$$

[illegible] (13) – (17) [illegible]

$$u(x,t)=w\left(\frac{t+x}{2}\right)+w\left(\frac{t-x}{2}\right)-w(0)-\frac{1}{2}\int_0^x(\ln\sigma)'(\xi)\,d\xi\int_{t-x+\xi}^{t+x-\xi}U(\xi,\zeta)\,d\zeta+$$
$$+\frac{1}{2}\int_0^{(t+x)/2}(\ln\sigma)'(\xi)\,d\xi\int_{\xi}^{t+x-\xi}U(\xi,\zeta)\,d\zeta+\frac{1}{2}\int_0^{(t-x)/2}(\ln\sigma)'(\xi)\,d\xi\int_{\xi}^{t-x-\xi}U(\xi,\zeta)\,d\zeta+$$
$$+\frac{1}{2}\int_0^{(t+x)/2}b(\xi)\frac{\rho_l(\xi)}{\rho_s(\xi)}d\xi\int_{t-x+\xi}^{t+x-\xi}\left(W(\xi,\zeta)-b(\xi)\int_0^{\zeta}e^{-b(\xi)(\zeta-s)}u(\xi,s)\,ds\right)d\zeta-$$
$$-\frac{1}{2}\int_0^{(t+x)/2}b(\xi)\frac{\rho_l(\xi)}{\rho_s(\xi)}d\xi\int_{\xi}^{t+x-\xi}\left(W(\xi,\zeta)-b(\xi)\int_0^{\zeta}e^{-b(\xi)(\zeta-s)}u(\xi,s)\,ds\right)d\zeta-$$
$$-\frac{1}{2}\int_0^{(t-x)/2}b(\xi)\frac{\rho_l(\xi)}{\rho_s(\xi)}d\xi\int_{\xi}^{t-x-\xi}\left(W(\xi,\zeta)-b(\xi)\int_0^{\zeta}e^{-b(\xi)(\zeta-s)}u(\xi,s)\,ds\right)d\zeta, \tag{18}$$

$$u(x,t)=b(x)\int_0^t e^{-b(x)(t-s)}u(x,s)\,ds \tag{19}$$

[illegible] $U=u_x,\ W=u_t,\ \omega(x)=-1\Big/\sqrt{\sigma(0)\sigma(x)}\,e^{-\int_0^x \frac{b(y)\rho_l(y)}{2\rho_s(y)}dy}$. [illegible] (18) [illegible] x [illegible] t, [illegible] $U(x,t), W(x,t), u(x,t)$ [illegible] $C(\Delta(T))$. [illegible] $U(x,t), W(x,t)$ (18), [illegible] $u(x,t)$ ([illegible] C^1) [illegible] (13), (15), (16). [illegible]

$u(x,t)$ ә (19), ძ⁂ нჰძ tęȷ ȷძ⁂ $v(x,t)$ LⓄнⓄ ȿ ts cſ (14), (17). ʃ lsfrj нⓄ ә

ɥⓄfnjsძ⁂sfnjscſ әᵣ lsȷ ȿ ls, ɥlsts ʬ lzძ⁂ ɥcſ $\phi(t) = u|_{x=0}$ вlzнȷ ls cſ L $C^1[0,T]$ cſ $\phi(0) = -1/\sigma(0) < 0$

, lsȷ . $\phi \in \tilde{\Phi}$.

ɿ tsȿⓄɿ ȷ ძ lsȷ tʃ ȷ tcᵣ , ɥlsts lzteⓄә ძ ძ⁂ȷ $A \ln \sigma = \phi, \phi \in \Phi$, ɿ ȿ ә cſ әⓄძ ძ⁂sძ⁂s

lzteⓄә ძ ძ⁂cſ ɺ tsძ lsȷ teteⓄ ɼ ძ ɿ lstsG ts әәȷ нȷ ძ ә teⓄfnjძ lsteȷ ძ⁂ȷ вⓄძ⁂Ⓞ tsәts

tʃtets fnjsteⓄძ⁂fnjsәts Z әȷ ȿ lststc ï ʬ lzძ⁂ ɥcſ:

$$z(x,t) = \left(z_1(x,t), z_2(x,t), z_3(x), z_4(x)\right),$$

ძ⁂ tʃ teȷ tcᵣ әძ ⁂ ძ⁂Ⓞ $\Delta(T)$, fnȷ fnjsȷ fnjsәȷ ძ⁂⁂s tstʃ teȷ нȷ ძ⁂ȷ ძ⁂⁂s tstʃ ȷ teⓄɥcſ ȷ lzძ ძ⁂sɣ ȷ ძ⁂cſ ძ⁂Ⓞ

fnȿⓄძ tcძ ȷ ʬ lzძ⁂ ɥcſcſ cſ L $u(\Delta(T))$ cſ ძ⁂stcძ s:

$$\|z\| = \max\left\{\|z_1\|, \|z_2\|, \|z_3\|, \|z_4\|\right\}.$$

ɺ Z әᵣ нȷ ძ⁂cſ ძ tʃ tsнძ ძ⁂sɣ ȷ fnjsәts $\tilde{Z}_0$, fnjsfnjsts ȷ ȷ cſ L әȷ ȿ lststc ï ʬ lzძ⁂ ɥcſ: әcſ нⓄ

$$z_0(x,t) = (P\phi)(x,t) \equiv \left\{\frac{1}{2}\phi'(t+x) - \frac{1}{2}\phi'(t-x), \frac{1}{2}\phi'(t+x) + \frac{1}{2}\phi'(t-x), \phi'(2x), 1/\phi(0)\right\}, \phi \in \tilde{\Phi} \qquad (20)$$

ʃ ɥȷ әcſ нძ⁂s, ძȷ ɣ нlz $\tilde{Z}_0$ cſ $\tilde{\Phi}$ cſ ძȷ ȷ lsfrj әLⓄcſ ძ ძ⁂s ï tsнძ⁂s Lძ⁂Ⓞ ɥძ⁂sȷ fnjstslsәȷ lsfnjsәcſȷ . ɼ fnjძ⁂cſ

ә (20) $\varphi \in \tilde{\Phi}$, lsts вlzнȷ ძ tʃ cſ fnjⓄls $z_0 \in \tilde{Z}_0$. ʃ tʃ teȷ нȷ ძ⁂cſ ძ tstʃ ȷ teⓄlststc

$M : Z \times \overline{R}_+ \to Z$, $\overline{R}_+ = \{t : t \geq 0\}$ ʬ tstcძ lzძ⁂Ⓞძ cſ

$$\left(M(z,\alpha)\right)_1(x,t) = \int_0^x f(z,\alpha)(\xi)\left[z_1(\xi, t+x-\xi) + z_1(\xi, t-x+\xi)\right]d\xi +$$

$$+\frac{1}{2}\int_0^x b(\xi)\frac{\rho_l(\xi)}{\rho_s(\xi)}\left\{z_1(\xi, t+x-\xi) + z_1(\xi, t-x+\xi) + z_2(\xi, t+x-\xi) + z_2(\xi, t-x+\xi) -\right.$$

$$\left.-b(\xi)\int_0^{t+x-\xi} e^{-b(\xi)(t+x-\xi-s)} z_2(\xi, s)\,ds - b(\xi)\int_0^{t-x+\xi} e^{-b(\xi)(t-x+\xi-s)} z_2(\xi, s)\,ds\right\}d\xi$$

$$\left(M(z,\alpha)\right)_2(x,t) = \int_0^x f(z,\alpha)(\xi)\left[z_1(\xi, t+x-\xi) - z_1(\xi, t-x+\xi)\right]d\xi +$$

$$+\frac{1}{2}\int_0^x b(\xi)\frac{\rho_l(\xi)}{\rho_s(\xi)}\left\{z_1(\xi, t+x-\xi) - z_1(\xi, t-x+\xi) + z_2(\xi, t+x-\xi) - z_2(\xi, t-x+\xi) -\right.$$

$$\left.-b(\xi)\int_0^{t+x-\xi} e^{-b(\xi)(t+x-\xi-s)} z_2(\xi, s)\,ds + b(\xi)\int_0^{t-x+\xi} e^{-b(\xi)(t-x+\xi-s)} z_2(\xi, s)\,ds\right\}d\xi$$

$$\left(M(z,\alpha)\right)_3(x) = 2\int_0^x f(z,\alpha)(\xi) z_1(\xi, 2x-\xi)\,d\xi + \int_0^x b(\xi)\frac{\rho_l(\xi)}{\rho_s(\xi)}\left\{z_1(\xi, 2x-\xi) +\right.$$

$$+z_2(\xi, 2x-\xi) - b(\xi)\int_0^{2x-\xi} e^{-b(\xi)(2x-\xi-s)} z_2(\xi,s)\,ds\Big\}\,d\xi$$

$$\left(M(z,\alpha)\right)_4(x) = -\int_0^x f(z,\alpha)(\xi)\, z_4(\xi)\,d\xi, \tag{21}$$

[illegible] $f(z,\alpha) = z_3 z_4 \big/ \left(1+\alpha z_3^2\right)\left(1+\alpha z_4^2\right)$.

[illegible] 1. [illegible] $z = z_0 + M(z,0)$, $z_0 \in \tilde{Z}_0$, [illegible] Z [illegible] $z_0 \in Z$.

[illegible] $A\ln\sigma = \phi$, $\phi \in \Phi$, [illegible] $z = z_0 + M(z,0)$, $z_0 \in \tilde{Z}_0$, [illegible]. [illegible] $\phi \in \Phi$ [illegible] $\tilde{\phi} \in \tilde{\Phi}$ $\|\phi - \tilde{\phi}\| \le \delta$, [illegible], [illegible] $\phi(0) = \tilde{\phi}(0)$ ([illegible] $\phi(0) \ne \tilde{\phi}(0)$ [illegible]). [illegible] $z_0 = P\phi$ [illegible] $\tilde{z}_0 = P\tilde{\phi}$ [illegible], [illegible] $z_0 \in Z_0$, $\tilde{z}_0 \in \tilde{Z}_0$ [illegible] $\|z_0 - \tilde{z}_0\| \le \delta$. [illegible] z_0 [illegible] Z_0, [illegible] 1 [illegible] $z = z_0 + M(z,0)$ [illegible].

[illegible] $z = z_0 + M(z,\alpha)$, $\alpha > 0$. [illegible] B_r - [illegible] Z [illegible] r,

$$B_r = \left\{ z \in Z : \|z\| \le r \right\},$$

[illegible]

$$\|z\|(x) = \max\left\{ \sup_{x \le t \le T-x} |z_1(x,t)|, |z_2(x,t)|, |z_3(x)|, |z_4(x)| \right\},\ z \in Z.$$

[illegible] 2. 1. $M \in C^1\left(Z \times \overline{R}_+; Z\right)$, [illegible] $Z \times \overline{R}_+$ [illegible] Z [illegible] $M_z(z,\alpha), M_\alpha(z,\alpha)$.

2. [illegible] $z \in Z$, $\alpha > 0$

$$\|M(z,\alpha)\|(x) \le \frac{c_1}{2\alpha}\int_0^x \|z\|(\xi)\,d\xi,\ x \in [0, T/2], \tag{22}$$

[illegible] $c_1(\alpha, T) = \left(1 + 2b_{00}\dfrac{\rho_{00,l}}{\rho_{0,s}}\right)\left(1 + 2T\,b_{00}\right)$.

3. [illegible] $r > 0,\ \alpha > 0,\ z \in B_r,\ y \in B_r$

$$\|M(z,\alpha) - M(y,\alpha)\|(x) \le c_2(r,\alpha,T)\int_0^x \|z - y\|(\xi)\,d\xi,\ x \in [0, T/2] \tag{23}$$

[illegible] $c_2(r,\alpha,T) = \left(1+4r\sqrt{\alpha}+b_{00}\dfrac{\rho_{00,l}}{\rho_{0,s}}\alpha\right)(1+2T\,b_{00})/(2\alpha).$

[illegible]

$$z = z_0 + M(z,\alpha). \qquad (24)$$

[illegible] 1. [illegible] $z_0 \in Z$. [illegible] $\alpha > 0$ [illegible] Z [illegible] $z(\alpha)$ [illegible] (24), [illegible] α [illegible] R_+ [illegible]

$$\|z(\alpha)\| \le \|z_0\|\exp(c_1 T/4\alpha). \qquad (25)$$

[illegible] [illegible] (25). [illegible] $z(\alpha)\in Z$ - [illegible], [illegible] $\alpha > 0$. [illegible] (22) [illegible],

[illegible]

$$\|z(\alpha)\|(x) \le \|z_0\| + \frac{c_1}{2\alpha}\int_0^x \|z(\alpha)\|(\xi)\,d\xi, \quad x\in[0.T/2], \qquad (26)$$

[illegible] (25) [illegible] (26).

[illegible] $z(\alpha), y(\alpha)\in Z$ - [illegible] (24).

[illegible] $B_{r(\alpha)}, r(\alpha) = \|z_0\|\exp(c_1T/4\alpha)$, [illegible] 2 [illegible] $w(\alpha) = z(\alpha) - y(\alpha)$ [illegible]

$$\|w(\alpha)\|(x) \le c_2\left(r(\alpha),\alpha,T\right)\int_0^x \|z-y\|\,d\xi, \quad x\in[0,T/2],$$

[illegible] $\alpha > 0$ [illegible] $w(\alpha)=0$, [illegible] $z(\alpha)=y(\alpha)$.

[illegible]

$$z^{(n+1)}(\alpha) = z_0 + M\left(z^{(n)}(\alpha),\alpha\right), \; n>0, \quad z^{(0)} = z_0 \qquad (27)$$

[illegible] (22) [illegible] $n \ge 0$

$$\|z^{(n)}(\alpha)\|(x) \le \|z_0\|\sum_{k=0}^{n}\frac{1}{k!}\left(\frac{c_1x}{2\alpha}\right)^k \le \|z_0\|\exp(c_1T/4\alpha),$$

[illegible] $B_{r(\alpha)}$.

[illegible] $w^{(n)}(\alpha)=z^{(n+1)}(\alpha)-z^{(n)}(\alpha)$. [illegible]

$$\left\|w^{(0)}(\alpha)\right\|=\left\|M\left(z_0,\alpha\right)\right\|\le c_3\left\|z_{(0)}\right\|,\ c_3=\frac{c_1T}{4\alpha},$$

$$\left\|w^{(n)}(\alpha)\right\|=\left\|M\left(z^n(\alpha),\alpha\right)-M\left(z^{n-1}(\alpha),\alpha\right)\right\|\le c_2\left(r(\alpha),\alpha,T\right)\int_0^x\left\|w^{(n-1)}(\alpha)\right\|(\xi)\,d\xi,\ n\ge 1,$$

[illegible] $n\ge 0$

$$\left\|w^{(n)}(\alpha)\right\|\le c_3\left\|z_0\right\|\frac{1}{n!}\left(\frac{c_2T}{2}\right)^n$$

[illegible] $z_0+\sum_{n=0}^{\infty}w^{(n)}(\alpha)$ [illegible]

[illegible]

$$\left\|z_0\right\|+c_3\left\|z_{(0)}\right\|\sum_{n=0}^{\infty}\frac{1}{n!}\left(\frac{c_2T}{2}\right)^n=\left\|z_0\right\|\left(1+c_3e^{c_2T/2}\right)$$

[illegible]

$$z^{(n+1)}(\alpha)=z_0+M\left(z^{(n)}(\alpha),\alpha\right)=z_0+\sum_{m=0}^{n}w^{(m)}(\alpha)$$

[illegible] Z. [illegible] $z^{(n)}(\alpha)\in B_{r(\alpha)}$, [illegible]

$$z(\alpha)=\lim_{n\to\infty}z^{(n)}(\alpha)\in B_{r(\alpha)}.$$

[illegible] (27) [illegible] M, [illegible] z - [illegible] (24).

[illegible] $z(\alpha)$ [illegible] [8]. [illegible] 2 [illegible] $G:Z\times R_+\to Z,\ G(z,\alpha)=z-z_0-M(z,\alpha)$, [illegible] $G_\alpha=-M_\alpha,\ G_z=I-M_z$. [illegible] $(z,\alpha)\in Z\times R_+,\ G_z(z,\alpha):Z\to Z$ [illegible] $M_z(z,\alpha)$ - [illegible] $z(\alpha)\in C^1(R_+,Z)$. [illegible]

[illegible] $z_0\in Z_0$. [illegible] 1 [illegible] Z [illegible] $z(0)$ [illegible]

$$z=z_0+M(z,0)$$

[illegible]
[illegible] [3, 4]). [illegible] $z_0 \in Z_0$, [illegible] (24) [illegible] Z [illegible] $\alpha \ge 0$. [illegible] $z(\alpha)$ [illegible] R_+. [illegible] 1 [illegible] $z(\alpha^2)$ [illegible] $\alpha = 0$. [illegible] $\tilde{G}(z,0)=0,\ \tilde{G} \in C^1(Z \times R_+, Z)$, [illegible] $\tilde{G}(z,\alpha) = G(z,\alpha^2)$,, [illegible] $\tilde{G}(z(0),0)$ [illegible]. [illegible] 1.

[illegible]. [illegible] $\tilde{\phi} \in \tilde{\Phi}$ [illegible], [illegible] $\phi(0)=\tilde{\phi}(0), \|\phi-\tilde{\phi}\| \le \delta, \phi \in \Phi$. [illegible], $z_0 = P\phi \in Z_0$ [illegible] $\tilde{z}_0 = P\tilde{\phi} \in \tilde{Z}_0, \|z_0 - \tilde{z}_0\| \le \delta$.

[illegible] $z = \tilde{z}_0 + M(z,\alpha)$.

[illegible] 1 [illegible] $\alpha > 0$ [illegible] Z. [illegible] $\tilde{z}(\alpha)$. [illegible] $z = z_0 + M(z,\alpha), \alpha > 0$ [illegible] $z(\alpha)$. [illegible] $z(0)$ [illegible]. [illegible] $\tilde{z}(\alpha)$ [illegible] $R : \tilde{Z}_0 \times R_+ \to Z,\ \tilde{R}(\tilde{z}_0, \alpha) = \tilde{z}(\alpha)$. [illegible], [illegible] $z = z_0 + M(z,0)$.

[illegible] 2. [illegible] $\delta \le \delta_0$. [illegible]

$$\alpha(\delta) \in C(0,\delta_0],\quad \alpha > 0,\quad \lim_{\delta \to 0} \alpha(\delta) = 0,$$

[illegible], [illegible] $\lim_{\delta \to 0} \|\tilde{z}(\alpha) - z(0)\| = 0$.

[illegible], [illegible] R [illegible] Z_{0l} [illegible] Z_0 [illegible] $Z_{0l} = \{z_0 \in Z_0 : l(z_0) < l\}$.

[illegible]

[1] [illegible] 1967. [illegible] 9-84.

[2] [illegible] 1962. [illegible] 11-12. [illegible] 1514-1531.

[3] [illegible] SH [illegible] 2006. [illegible] 2. [illegible] 86-91.

[4] Imomnazarov Kh.Kh. and Kholmurodov A.E. Direct and inverse dynamic problems for SH-waves in porous media // Mathematical and Computer Modelling. 2007. V.45. [illegible] 3-4. pp.270-280.

[5] [illegible] 1. 1993. [illegible] .112-124.

[6] [illegible] 1993. [illegible] 1. [illegible] 100-111.

[7] Blokhin A.M., Dorovsky V.N., Mathematical modelling in the theory of multivelocity continuum, Nova Science Publishers, Inc, New York. 1995, 192 p.

[8] [illegible] 1968. 496 [illegible]

[illegible] SH [illegible]

[illegible] – [illegible] SH [illegible]

Annotation – It is built regulative algorithm of one inverse problem for univariate equation SH waves in saturated by liquid porous ambience, in which occurs the loss to energy at between component frictions.