GC-2006-0313

Complainant USW Local 11-6 Data Requests to PSC

Requested From: Tim Schwarz, Esq.

Date Requested: June 6, 2006

Data Request 1: Identify all documents that any member of Staff has reviewed pertaining to the use, reliability, efficiency and/or safety of the Grunsky bag for gas utility work, and for each, indicate where the document was obtained and when it was reviewed.

RESPONSE: Sometime in January 2006, the Staff inquired about available information that Laclede personnel knew about concerning changing meters with the Grunsky bag method. On February 1, 2006, Laclede personnel e-mailed the Staff information from the Charles Grunsky Company (a brochure, an equipment catalog/product list, and a memorandum describing the Grunsky Meter Change Method). This information was reviewed sometime after it was received.

The internet was also searched for information about the Grunsky meter change method. Some websites were found with limited information (patent dates, description of the method, etc.), but website addresses were not noted. No information indicating problems with the method were found.

Data Request 2: Identify all studies that any member of Staff has conducted or participated in pertaining to the use, reliability, efficiency and/or safety of the Grunsky bag for gas meter change-outs or other gas utility work, indicating the date of the study and the person(s) who participated.

RESPONSE: No "studies" have been conducted or participated in by Staff.

Data Request 3: Identify all persons outside of the PSC with whom any member of Staff has consulted with about or discussed the use, reliability, efficiency and/or safety of the Grunsky bag for gas meter change-outs or other gas utility work, and for each person identified, describe the information provided by said person.

RESPONSE: The Staff discussed the Grunsky bag meter change-out method with Laclede personnel. The conversations included Mark Lauber, Ben McReynolds, other Laclede personnel.

EXHIBIT
Exhibit 2
7-26-06 KF

The information provided was as follows: a basic description of the procedure for using the Grunsky bag method; a description of the pilot program conducted to evaluate the Grunsky meter change-out procedure (in the Missouri Natural Division, they changed out 100 meters using the method and went into each of the residences to check pilot light operation and had 100% success. The Company conducted a similar pilot project in Laclede area with 50 meter change-outs and went inside on each one to check pilot lights and had 100% success); the Company began using the procedure in 2005 and at the time of the conversation with Staff, the Company had done about 500 meter change-outs using the procedure (about 300 in Missouri Natural Division and about 200 in Laclede).

The Staff discussed use of the Grunsky bag meter change-out method with Jim Gorman at Missouri Gas Energy. MGE had been using the Grunsky bag method to change-out meters for approximately 10 years. It was estimated that MGE had successfully changed out over 100,000 meters using the Grunsky bag method. MGE personnel indicated that they had had success using the method and had not identified any problems using the method.

Data Request 4: Please produce for inspection by USW Local 11-6 all documents identified in response to, or responsive to, each of the above data requests.

RESPONSE: The information identified above in Data Request 1 from the Charles Grunsky Company (a brochure, an equipment catalog/product list, and a memorandum describing the Grunsky Meter Change Method) is attached.

Requested by: Sherrie A. Schroder
Attorney for Complainant
USW Local 11-6

Phone: (314) 727-1015
Fax: (314) 727-6804

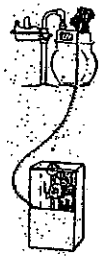
The information provided to Complainant USW Local 11-6 in response to the above data requests 1-4 is accurate and complete, and contains no material misrepresentations or omissions based upon present facts known to the undersigned. The undersigned agrees to immediately inform Complainant USW Local 11-6, by notice to its attorney Sherrie A. Schroder, if any matters are discovered which would materially affect the accuracy or completeness of the information provided in response to this data request.

Date: 6/20/2006

Signed By: Robert Sramkoski

Title: Utility Regulatory Engineering Supervisor - Energy Department

COMPANY Inc.



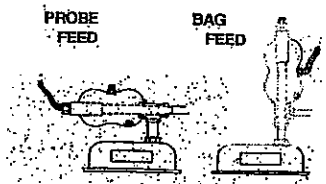
Change Its Gas Meters?

Grunsky "Quick-Change" Method

1. Service person changes meter. Average time: six minutes.

- NO INTERRUPTION OF SERVICE
- NO customer contact
- NO call-backs
- NO missed appointments
- NO pilot re-lighting
- NO liability
- NO troubleshooting
- NO unnecessary travel time between jobs

ESTIMATED COST SAVINGS: 50%



5-Minute Change Procedure

1. Service person carries hot-change equipment and replacement meter to location. This requires only one trip.
2. Using a wrench, back out plug at meter outlet tee to finger- tight and loosen meter nuts.
3. Snap mouth of bag over end of tee.
4. Turn on auxiliary gas valve.
5. Purge air from bag with purge valve at bag.
6. Remove the plug with fingers by manipulation through rubber bag. Plug drops into bag. At this stage, auxiliary gas is mingling with meter gas.
7. Twist probe into house line through tee. This places house load entirely on auxiliary supply.
8. Shut off service cock and quickly make meter change.
9. Open service cock and open bag valve to purge new meter.
10. Remove probe from house line so meter gas can flow to appliances.
11. Manipulate plug through bag and screw into tee.
12. Shut off auxiliary gas valve and remove bag.
13. Dope remaining threads on plug and tighten with wrench.
14. Make soapsuds test and return equipment to truck.

VIDEOS AVAILABLE!

[redacted]

Are You Ready for a Change?

Charles Grunsky Company
The Original "Quick-Change" Method
Since 1968

CHARLES GRUNSKY

How Does Your Company

Old Method

1. Schedule appointment with customer.

   On average, it takes a clerk three hours to make 27 phone appointments. Postcard systems take staff time, too, and require follow-up.

   "No shows" mean non-productive field time and more call-backs.
2. Interrupt customer service.
3. Re-light pilots.
4. Troubleshoot any resulting problems with customer appliances.
5. Travel to next job.

The company's Schuylkill Division conducted a pilot program to evaluate three areas:

- load capacity of the equipment
- cost to retrofit existing outdoor sets
- actual field changing of meters using the Grunsky method.

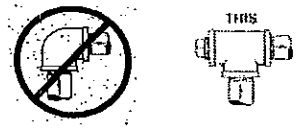
Compare the Difference:

Other Companies

- **Custom Connectors**
  Other companies require that you purchase their own connectors. Moving parts mean risk of failure and service interruption.
- **High up-front costs**
  You pay $5 or more per meter just for custom connecting. In short, you make a sizable investment...with an uncertain return.
- **Risk**
  Has the product met the test of time?

Grunsky Company

- **No Custom Connector**
  The Grunsky Method snaps on to a standard "Tee" connector.
- **No up-front costs**
  Buy our system only when you're ready to use it — not 10 years before! When the meter's due for change, our system cuts meter-change time by half.
- **No Risk**
  We have a 32-year track record. Our method is used by 62 companies worldwide. We remain family owned and operated.!



Fits to a Tee

The Grunsky "bag" method requires only a "Tee" connection to the house line.

This permits Grunsky's simplified device to supply house load during the few moments necessary to change meters.

Many gas utilities have already adopted the outlet tee as standard. Among other benefits, it allows service and repair to parts "upstream" from the "Tee."

For companies that have not yet upgraded to the "Tee" standard, the "Tee" costs only pennies more than an "Elbow." The savings offered by the Grunsky method, together with other "Tee" benefits, more than justify this minimal cost difference.

Equipment

- Weight: less than 23 lbs., including high-pressure cylinder (1/6 cu. ft ICC rating 1800 lbs.)
- Contains enough natural gas to make 25-30 meter changes.
- Empty cylinder can be removed and replacement cylinder connected in one minute.
- Probes and bags available in tee sizes ranging from 3/4-inch to 2-inch.

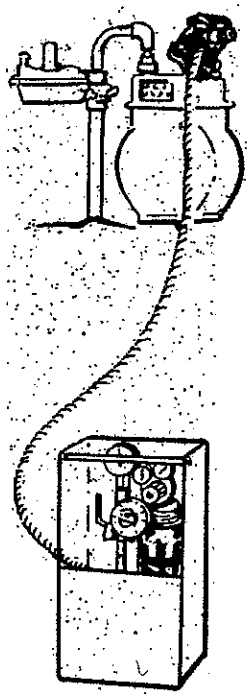
Customer List:

Grunsky Company's longtime customers include

- Pacific Gas and Electric Co.
- Southwest Gas Corp.
- Reliant Energy - ARKLA
- San Diego Gas and Electric Co.
- Washington Gas
- Memphis Light Gas and Water

CHARLES GRUNSKY COMPANY, Inc.

2804 Newlands Avenue • Belmont, Ca., 94002



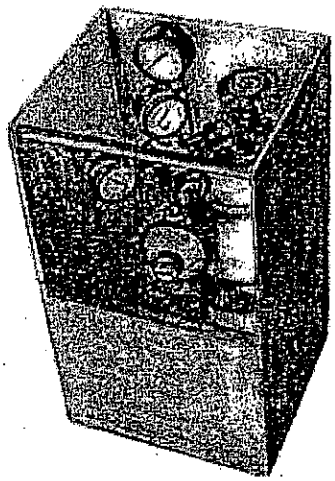
Gas Meter Quick-Change Equipment

(650) 593-9302

TELEPHONE / FAX

CHARLES GRUNSKY COMPANY, Inc.
2804 Newlands Avenue • Belmont, Ca., 94002

CARRIER I

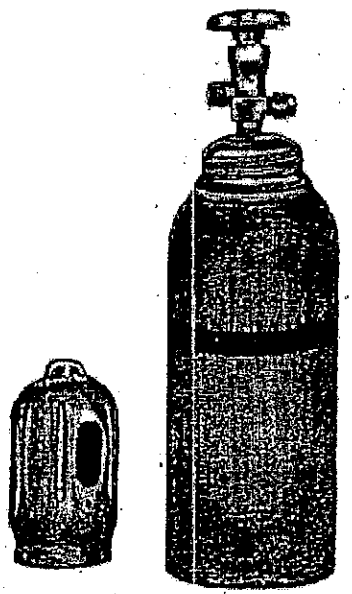


This lightweight delivery system includes: Aluminum carrier box, H.P. regulator, L.P. regulator and all necessary piping and gauges.

Cylinder, hoses and assemblies sold separately.

CYLINDER

Model 20 cu ft.
1800# ICC Rating
2015 psi Working Pressure
3360 psi Blow-off Safety Valve



Includes: Valve, neck ring and protective cap.

TELEPHONE / FAX
(650) 593-9302

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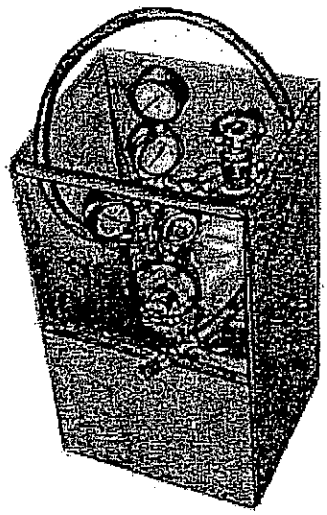
CARRIER II

Same as Carrier I with addition of Quick Coupler bypass. Hooks up to risers with ball check valves to bypass cylinder gas.



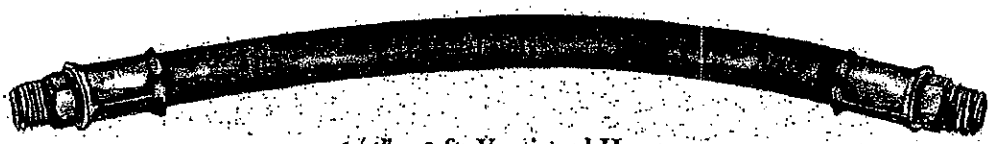
Cylinder sold separately.

QUICK COUPLER

1/8" Ball Check Valve Probe

1/4" Ball Check Valve Nipple

1/4" Ball Check Valve Coupler



1/4" x 3 ft. Versicord Hose

TELEPHONE / FAX
(650) 593-9302

CHARLES GRUNSKY COMPANY, Inc.
2804 Newlands Avenue • Belmont, Ca., 94002

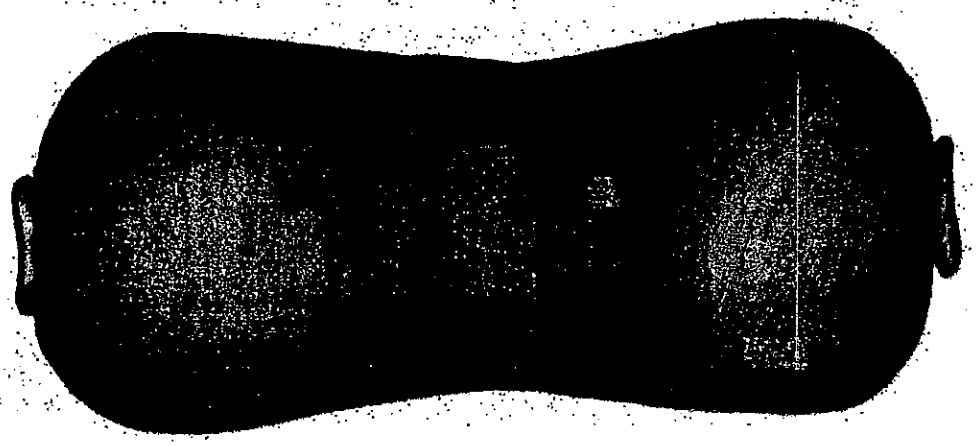
PROBE & BAG ASSEMBLY

Size of Meter Tee	Code No.
3/4"	PB-750
1"	PB-1000
1-1/4"	PB-1250
1-1/2"	PB-1500
2"	PB-2000

Assemblies consist of a neoprene dipped latex rubber bag, a pliable neoprene probe and a 3 piece aluminum purge valve set.

GAS RISER BAG
(B-xx1500)

For easy replacement of riser union-style gas stop.
18" bag rolled at both ends.



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(650) 593-9302

CHARLES GRUNSKY COMPANY, Inc.
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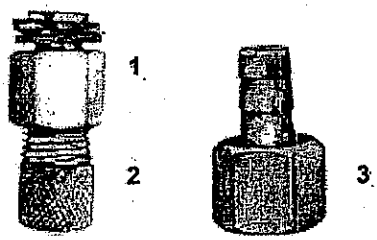
BAG

Size of Meter Tee	Code No.
3/4"	B-750
	B-1000
1-1/4"	B-1250
1-1/2"	B-1500
2"	B-2000

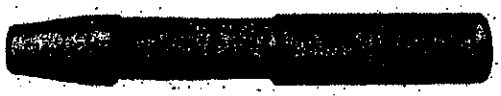
Made of gas resistant natural rubber dipped in neoprene

PURGE VALVE SET
(Code No. PBP)



Set of aluminum probe and bag fittings.
Selective purge-type valve. 3 piece set

PROBE



Size of Meter Tee	Code No.
3/4"	P-750
	P-1000
1-1/4"	P-1250
1-1/2"	P-1500
2"	P-2000

Pliable neoprene molded probe.

TELEPHONE / FAX
(650) 593-9302

CHARLES GRUNSKY COMPANY, Inc.
2804 Newlands Avenue • Belmont, Ca., 94002

BALL VALVE

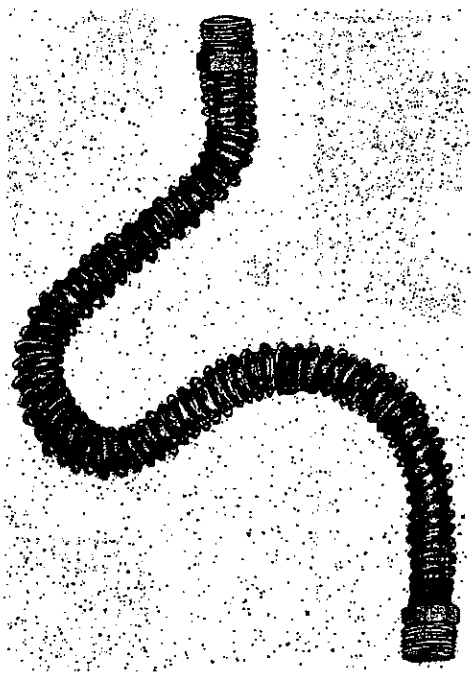
1/2" Brass shut-off valve.

Included in carriers. Also sold separately.

FLEX HOSE

1/2" I.D. Plastic, with full spring and brass fittings.

Available in two sizes:
5 ft. lengths
7.5 ft. lengths



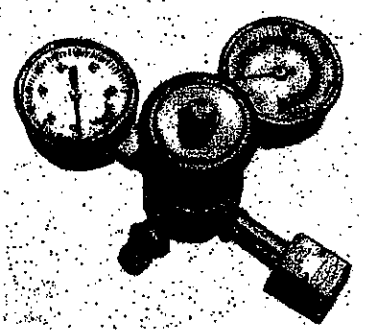
TELEPHONE / FAX
(650) 593-9302

CHARLES GRUNSKY COMPANY, Inc.
2804 Newlands Avenue • Belmont, Ca., 94002

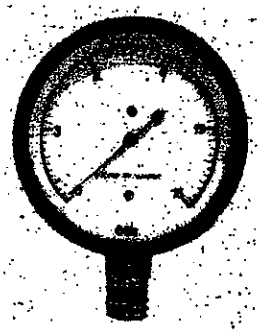
Replacement Parts

HIGH PRESSURE REGULATOR
(SERIES 600)

Maximum Inlet Pressure 3000 psi.
Internal Outlet Pressure preset to 50 psi.
Replaceable brass gauges
& tailpiece available.
0-100 psi gauge
0-4000 psi gauge



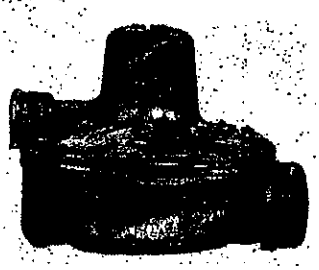
WATER COLUMN GAUGE



0-15" of Water Column
2-1/2" Dia.
1/4" NPT.
Bottom Connect

LOW PRESSURE REGULATOR
(FISHER L.P.)

Maximum Inlet Pressure 250 psi
Maximum Reduced Pressure 5 psi
Orifice Size — .078"
Inlet Connection — 1/4" NPT
Outlet Connection — 3/8" NPT

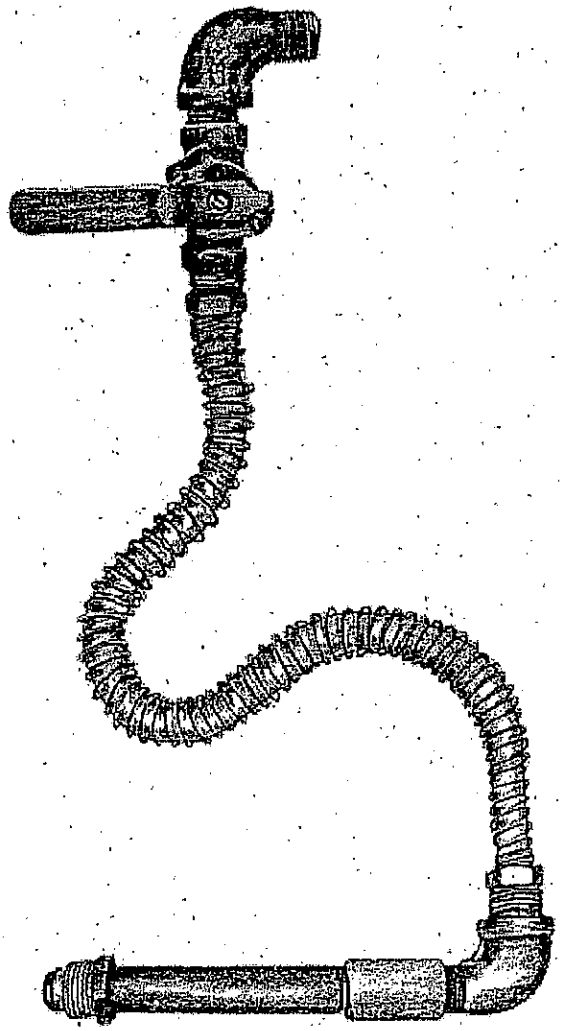


TELEPHONE / FAX
(650) 593-9302

CHARLES GRUNSKY COMPANY, Inc.
2804 Newlands Avenue • Belmont, Ca., 94002

Specialty Items

MANIFOLD CHANGER
(MC-100)



HOSE:
15 ft. Length
5/8" I.D. Plastic
S.S. Spring wrapped.

FITTINGS:
3/4" x 1/2" Bushing on swivel, ball valve and elbows.

May be purchased separately.

TELEPHONE / FAX
(650) 593-9302

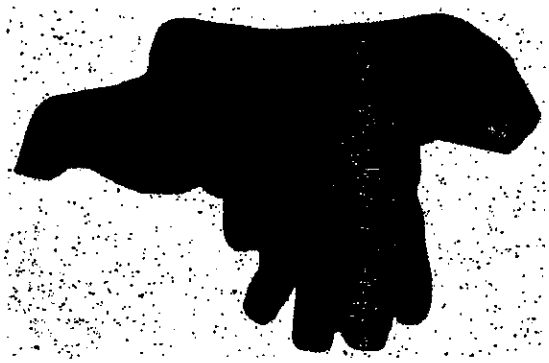
CHARLES GRUNSKY COMPANY, Inc.
2804 Newlands Avenue • Belmont, Ca., 94002

Specialty Items

GRAB BAG

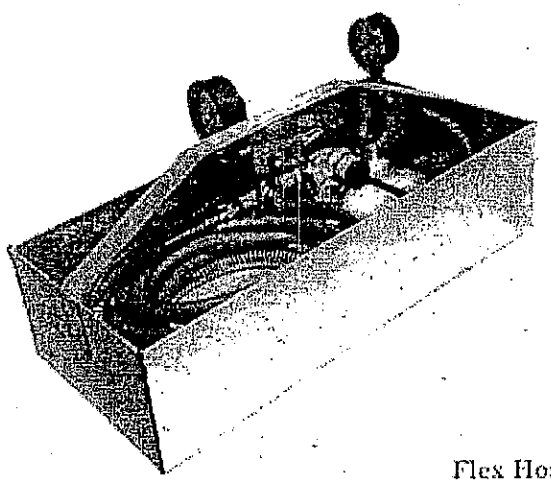
For service or change-out of regulators on multi-meter manifolds.

Rubber, molded-hand bag. Zippered full length with velcro tie straps.



raining video available

TOTE TRAY



For use in areas where 250 psi is the maximum pressure available.

May be used with propane tank or off CNG truck tanks.

Comes with regulator, gauges, shut-off valve and a 10 ft. 3000# pressure hose.

Flex Hose, Probe & Bag assembly sold separately

TELEPHONE / FAX
(650) 593-9302

CHARLES GRUNSKY COMPANY, Inc.

2804 Newlands Avenue • Belmont, Ca., 94002
Telephone: (650) 593-9302 • Fax: (650) 593-9302

Product Order Information

CODE	TEE	DESCRIPTION
PB-750	3/4	Probe & Bag Assembly
PB-1000	1	Probe & Bag Assembly
PB-1250	1-1/4	Probe & Bag Assembly
PB-1500	1-1/2	Probe & Bag Assembly
PB-2000	2	Probe & Bag Assembly

CODE	TEE	PROBE REPLACEMENTS
P-750	3/4	Probe Only
P-1000	1	Probe Only
P-1250	1-1/4	Probe Only
P-1500	1-1/2	Probe Only
P-2000	2	Probe Only

CODE	TEE	BAG REPLACEMENTS
B-750	3/4	Bag Only
B-1000	1	Bag Only
B-1250	1-1/4	Bag Only
B-1500	1-1/2	Bag Only
B-2000	2	Bag Only

PBP — Set of Probe & Bag Fittings (Purge Valve Set)

GRAB BAG — For Manifold Regulator repair

B-xx1500 — Bag 18" rolled ends: Service cock repair

MC-100 — 5/8" I.D. plastic hose with spring, 3/4" x 1/2" bushing on swivel, and ball valve.
FITTINGS: (less probe and bag)
HOSE: (15 ft. length)

CALL FOR CURRENT PRICES

CHARLES GRUNSKY COMPANY, Inc.

2804 Newlands Avenue • Belmont, Ca., 94002
Telephone: (650) 593-9302 • Fax: (650) 593-9302

Product Order Information

CARRIER	Aluminum box, with H.P. & L.P. regulators, gauges and pipe fittings. (Less Hose, PB Assembly & Cylinder) _____
CARRIER II	Same as Carrier I with Adaption for quick coupler bypass. _____
CYLINDER	Model 20 cu. ft. with neck ring and capped valve. _____
CALIBRATION KIT (not shown)	Tests combustible gas and/or carbon monoxide indicators. Used with 20 cu. ft. cylinder of certified test gasses. _____
TOTE TRAY	Tray, with regulator, gauges, and shut-off valve. For Low Pressure cylinders to 300 psi. _____
FLEX HOSE	1/2" I.D. plastic hose with spring: 5 ft. length _____ 7.5 ft. length _____
	REPLACEMENT ITEMS
WATER COLUMN GAUGE	Gauge: 0 - 15" Water Column _____
FISHER	Regulator: Low Pressure
SERIES 600	Regulator: High Pressure _____ Gauge: 0 - 100 psi _____ Gauge: 0 - 4000 psi _____ Tail Piece _____ Face Plate _____
CARRIER BOX	Aluminum box with handle
BALL VALVE	1/2" Shut Off Valve
QUICK COUPLER	1/4" x 3' Versicord hose, 1/4" Coupler, 1/4" Nipple & 1/8" Ball check valve. _

CALL FOR CURRENT PRICES

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TELEPHONE / FAX
(650) 593-9302

Gas Meter Quick-Change Equipment Training Videos Available

M E M O R A N D U M

THE GRUNSKY METER CHANGE METHOD

Submitted by: William F. Clauhs
Division Engineer
Schuylkill Division
October 21, 1985

THE GRUNSKY METER CHANGE METHOD

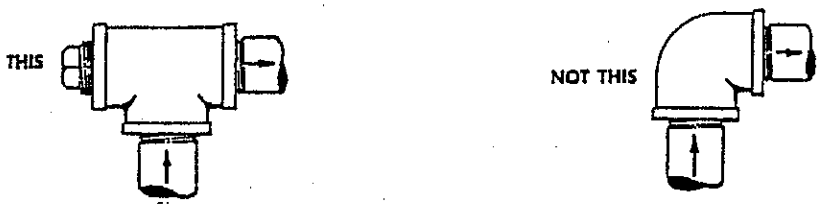
BACKGROUND:

The Grunsky Method was developed by Southern California Gas and Pacific Gas and Electric in the 1950's. The Method implemented when the outdoor meter sets installed after World War II became due for a periodic meter change. The initial emphasis in designing the Grunsky "Hot-Change" method was based on making the P.M.C. more convenient for the customer By using a supply of compressed natural gas, Charles Grunsky invented a system of providing continuous gas service to a customer's fuel line while isolating the gas meter. His method only provided uninterrupted service, but allowed the growing number of outdoor gas meters to be changed without gaining access to the customer's premise

According to Bob Hudson of Pacific Gas and Electric, his company is presently averaging 14.7 meter changes per day using Grunsky Method. By using the Grunsky Method, the California Gas Companies were not only able to improve "customer convenience, found the "Hot Change" system also afforded labor savings by eliminating the need to purge fuel lines, relight appliances make revisits to C.G.I. customers.

DESCRIPTION OF METHOD:

To use the "Hot Change" method, a standard threaded tee must be installed in lieu of an elbow on the outlet piping of the meter set. The "Tee" installation allows the use of the Probe and Bag Assembly invented by Grunsky.



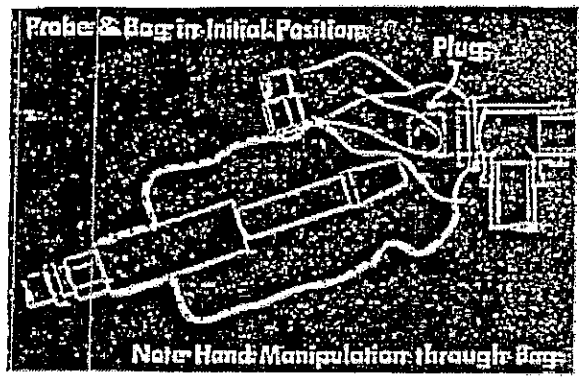
The Grunsky meter changer includes a standard D.O.T. 20 S.C.F. cylinder to store C.N.G. at 2,000 PSIG and two regulators to reduce the pressure in stages to six (6) inches W.C. Each regulator has over pressurization relief devices. The patented invention is a hollow, tapered, hard-rubber probe surrounded by a pliable rubber bag. The probe and bag assembly is connected to the outlet side of the L.P. regulator via a 3/4 inch seven-foot flexible hose with a quarter-turn valve. Probes are available in sizes to accommodate 3/4, 1, 1¼, and 2-inch tees. The total kit, enclosed in an aluminum carrying case, weighs 26 pounds.

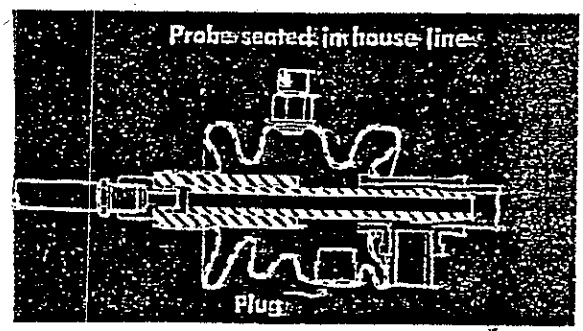
The manufacturer's procedure for replacing a meter with the "Hot Change" method is as follows:

CHANGE PROCEDURES:

Serviceman carries hot change equipment and replacement meter to meter location. This requires only one trip. He then proceeds as follows:

1. With wrench, back out plug at meter outlet tee to finger tight and also loosen meter nuts.
2. Snap mouth of bag over end of tee.
3. Turn on auxiliary gas valve.
4. Purge air from bag with purge valve at bag.
5. Remove the plug with fingers by manipulation through rubber bag. Plug drops into bag. At this stage auxiliary gas is mingling with meter gas.
6. Force probe into house line through tee, using a twisting motion. This places house load entirely on auxiliary supply.
7. Shut off service cock and quickly make meter change.
8. Open service cock and purge new meter by opening bag valve.
9. Remove probe from house line so meter gas can flow to appliances.
10. Manipulate plug through bag and screw into tee one or two turns.
11. Shut off auxiliary gas valve and remove bag.
12. Dope remaining threads on plug and tighten with wrench.
13. Make soapsuds test and return equipment to truck.





PILOT PROGRAM:

The pilot program in Schuylkill Division was designed to evaluate three areas: the load capacity of the equipment, the cost to retrofit existing outdoor sets, and the actual field changing of meters using the Grunsky equipment.

PILOT PROGRAM (cont'd):

Load Capacity of the Equipment:

To determine the load capacities of the 3/4 and 1-inch probe, "Tees" were installed on the fuel line feeding the high-efficiency heaters in the appliance service training area at West Conshohocken Gas Plant. Connected to the fuel line was a demonstration cart, containing four burners and six (6 pilot assemblies. U-gauges were connected at the outlet of the regulator and the burner fuel line. While the gas was being supplied by the Grunsky kit, all pilots were lit and various loads were created. The variation of loads was accomplished by turning on and off the different water heater burners and high-efficiency heaters. For each load condition, pressure readings were recorded.

The manufacturer supplies a Fisher 912 regulator with a capacity of 100 cu. ft. per hour. As expected, fuel line pressures drop excessively on loads over 150 C.F.H. However even with cycling loads as high as 269 C.F.H., the pilots remained on.

The 912 regulator was replaced by our standard Rockwell house regulator with a 1400 C.F.H. capacity. With adequate regulation the 3/4-inch probe could handle a 291 C.F.H. load with a 3-inch drop in pressure

PILOT PROGRAM (cont'd):

Retrofitting Existing Outdoor Meter Sets:

The plan to retrofit existing sets during the 1985 periodic meter changes had two major considerations: first, tees were required for a realistic field test (what better locations than the meters relocated outdoors 16 years ago where we planted bushes.) Secondly, with 60 percent of the class "A" meters already outdoors, a cost figure for the additional expense to install the "Tee" would be required.

In January, to accomplish the retrofitting, the Schuylkill Division Utilization Mechanics were trained on installing tees for the Grunsky Method. Tees were to be installed in less than ten minutes. Any instances where tees could not be installed or where the time exceeded the ten minute limit were to be reported by turning in a Miscellaneous Ticket. There were 1300 outdoor periodics completed, with only six (6) tickets turned in. To verify the "feed-back" information, and also to set up the field demonstrations, addresses of completed outdoor periodics were visited on a random basis. Overall, the results from the field survey were outstanding. The mechanics not only showed innovative methods of installing tees, but practically installed tees on every outdoor periodic

Initially, we estimated the "Tee" installation would add an additional five to ten minutes to the job-site time on a periodic. When comparing Schuylill's periodic change times including tee installation with those periodic change times

PILOT PROGRAM (cont'd):

Retrofitting Existing Outdoor Meter Sets (cont'd):

f the four other divi ons it determined that Schuy ki l had premise time charged to the pe iodic accounts than the divis ons using the traditiona methods Th no additiona nstal ti expense was discernabl(

Field Testing:

To fi(d te t the Grunsky equipment appointments were made th tome on th sam tre t who previous y had the Tee connection instal ed Th customers re to d f our test program and entrance to their home was required

Th fi(d te ting was accompl hed by two one man tua y changing the outdoo meter and the second man inside th prem monitoring the fue line pressures cyc ing oad and checking the tabi i y of the pilots

To stimu ate the typical work day meters were oaded d un aded t both the serv ce bui ding p tf and th customer premise Routine paperwork such as meter rders and the Chron-Time Sheet also comp eted for each ob ocation

Re u ts from the two day of fi(d testing were encouraging On the irst day fourteen meters were changed while ixteen changed on the second day More meta cou d have been changed on the fir day but three C G I were encountered

PILOT PROGRAM (cont'd):

Field Testing (cont'd):

On the thirty meters changed, not one pilot was lost. The only time the pressure significantly fluctuated to a nine (9 W.C. was when the probe was inserted under a "no-load" situation. The increased surge was caused by the pressurized bag collapsing as the probe was inserted. One method we found to rectify the "no-load" customer was to "create" load by momentarily cracking the purge valve on the bag.

The Field Testing also indicated the 20 SCF bottle supplied would generally be sufficient for a typical springtime day of P.M.C.'s. Our customers' consumption of gas was very slight during the field test days of April and May. Most of the CNG used was contributed to meter purging.

The presence of bushes did not dramatically effect the use of the Grunsky equipment. Basically, the room required to change the meter is adequate to install the bag and probe assembly.

ADVANTAGES OF GRUNSKY METHOD:

Block Meter Changes:

One of the major benefits of going to the "Hot Change method on outdoor meters is the ability to perform "block" meter changes. Under the Grunsky Method all of the outdoor meters due for a P.M.C. could be geographically changed, minimizing or eliminating travel time between jobs. Although

ADVANTAGES OF GRUNSKY METHOD (cont d):

Block Meter Changes (cont d):

po tm t pa q h to

j to

h y h d

pe h gu

h im pe

SCHUYLKILL DIVISION 1985 P.M.C.

Month	Hrs. Charged	Meters Changed	Hours/Meter
Y			
M h			
A			
Y			
Y			
A qu	5.	3.	1.54
T			

y h

Me h d h

pe h po

y q

y y ry

No Appointments:

th ky Method h im h k pe

h tm

pe Cu y h

ADVANTAGES OF GRUNSKY METHOD (cont'd):

No Appointments (cont'd):

clerk spends approximately three (3) hours of phone calling to make 27 appointments. The appointment expense amounts to $.80 per periodic. Projecting 85% of the meters will be outdoors 16 years from now, the total system expense for appointments would be approximately $10,400 in today's dollars.

Another office expense encountered in our present system is the handling of post-card appointments. Presently, the G.S.D. maintains a file of P.M.C.'s where the customer has been notified that their gas meter is due for a change. Upon receipt of the post-card, the G.S.D. must match the request with the original meter change order and dispatch a serviceman from the board on the date requested. Under the Grunsky Method, not only would we minimize the dispatchers' time to indoor sets, but more importantly, we reduce the number of customers requesting meter changes on peak workload days. A good example is the peak transfer days we experience near the first and 15th days of every month.

Elimination of C.G.I.'s:

As experienced in our field testing, customers "break" appointments. During March through June this year, the divisions charged 831 hours to periodic C.G.I.'s for the 10,400 class "A" meters changed. The projected yearly C.G.I. expense for 1985 can be estimated at $40,000.

ADVANTAGES OF GRUNSKY METHOD (cont'd):

Other Uses:

By having the ability to maintain continuous service without the customer being home, we open a new avenue for other operating procedures. With the tee installed, we have the possibility of replacing other gas facilities such as regulators, defective I.V.U.'s or the installation of a meter bar. In distribution work, the tee and the use of larger cylinders would play a role in maintaining service to residential heating customers in cold weather in lieu of electric space heaters.

SAFETY CONSIDERATIONS:

A major concern expressed during the pilot program was the number of potential hazards that would go undetected under the Grunsky Method. A review of Schuylkill's red tags during our peak P.M.C. change month indicated some interesting results. Most of the red tags generated in March resulted from customer requested service, namely odor and appliance service calls.

SCHUYLKILL DIVISION - RED TAGS
March, 1985

Type of Work	Number of Jobs	Number of Red Tags	% Red Tags Per Job
Appliance Service	766	18	2.3%
Meter Installations	137	4	2.9%
Inside Odor Call	167	15	9.0%
P.M.C.	712	9	1.3%
Transfers	2813	5	0.2%

SAFETY CONSIDERATIONS (cont'd):

Using March's ratio of 1.3 red tags per 100 meters changed, we project that Schuylkill will red tag 36 appliances during the 2800 P.M.C.'s in 1985. In the last 12 months ending in June, 666 red tags were installed, indicating periodics account for five (5) to six (6 percent of the precautionary or hazardous conditions found in Schuylkill Division.

In future years, the F.O.D. system could be used to identify potential red tag addresses. One scenario could be customers requiring a meter change where P.E.Co. has not provided appliance service work for a pre-determined number of years. Appointments would be made for the non-serviced customers, while the Grunsky Method was used for the vast majority of outdoor periodics.

SUMMARY:

As proven by Pacific Gas and Electric and our Field Testing, the Grunsky Method offers a tremendous way of increasing our productivity in future meter changes. Grunsky's Method coupled with block changes, elimination of appointments and C.G.I.'s, offers a potential yearly savings to the Company of $258,000.

To capitalize on these savings, we must not only install "Tees" on the new or rebuilt sets, but also retrofit the existing outdoor set during a P.M.C. or other meter work. Schuylkill Division has proven the tee retrofit can be accomplished at a minor incremental expense.

The field order dispatch computer system will open a new door for gathering service history about our customers. In

SUMMARY (cont'd):

the next decade, computer programs could be developed to pin-point addresses where visitations should be made, rather than continuing a work-practice as a stop-gap measure to catch a relatively few number of red tag conditions.

RECOMMENDATIONS:

1. The diaphram outdoor meter standards be revised to include the "Tee."

2. Allow the retrofitting of the 1986 outdoor periodics with "tees" unless a division exceeds a preset economic break-point of 1.1 hours per meter.

3. Stress compliance of the Red Tag Policy on customer-requested work.

4. Place a note in the "bring-up" file for January, 2001, to "Develop Program for the F.O.D. System to Identify Potential Red Tag Addresses."