

General Requirements For Construction Work In The Vicinity Of Gas Main

1. Notification of work should be circulated as stipulated in the Excavation Permit issued by Highways. The same procedure should also be followed for construction site other than Highways' area.
2. Contact HKCG at least 3 days in advance for excavation adjacent to gas pipe. Site meeting to be arranged whenever required. HKCG could be contacted via 29631811 or 28806999 in case of emergency.
3. When excavation is to be carried out adjacent to a gas main, the exact alignment and profile must be ascertained by a series of hand-dug trial holes.
4. **BORING AND DRILLING IN THE VICINITY OF GAS MAIN IS STRICTLY PROHIBITED.** HKCG must be consulted first should this work be required.
5. No excavator is allowed for excavation at 1 metre around the gas pipe.
6. No naked flame is allowed adjacent to the gas pipe.
7. Do not encase, even temporarily, part or all of our gas pipes in any form of concrete structure.
8. To avoid the risk of gas accumulation leading to any tragedy, no gas pipe is allowed being enclosed in confined space such as long decked over trench.
 - 8.1 In case the proposed deck of trench will cover any gas pipe, it should be considered to adjust the trench alignment and/or the working method at the planning stage. Should any gas pipe required to be diverted, the request should be made to HKCG and the diversion should be completed before the trench is decked.
 - 8.2 If inevitably any gas pipe to be left in the decked trench, prior agreement should be sought from HKCG. Adequate protection measure such as partition should be built to separate the gas pipe from the confined space under deck.
9. No machinery should sit directly above our metal iron gas pipes.
10. The velocity and amplitude of vibration acting on the gas pipe by the work must not exceed 25mm/s peak particle velocity and 0.2mm respectively.
11. The velocity and amplitude of vibration acting on the gas governor by the work must not exceed 13mm/s peak particle velocity and 0.1mm respectively.
12. Vibration monitoring records should be forwarded to HKCG for reference.
13. Excavation running close and parallel to the gas pipe should be avoided. Should such excavation be required, discussion/agreement must be sought from HKCG. Any mechanical joint to be exposed, the working party shall inform HKCG in advance and make provision to HKCG for leak detection and bolts replacement where necessary.
14. Suspension of gas pipe to be agreed with HKCG.
15. The gas pipe would normally have a cover of 450mm and 900mm in footpath and carriageway respectively. However, there are cases where gas mains have cover less than the before stated figures. Steel protection plates would normally be laid on top of shallow cover pipe. Due care should be given in subsequent excavation with the presence of steel plate.
16. Report any damage, even superficial, to HKCG for remedial action.

17. Access to HKCG's installations should be maintained at all times for regular inspection and emergency repair.
18. Sufficient clearance to be maintained for both safety and maintenance purpose. Normally, 600mm and 300mm clearance is required for steel and all other gas pipe respectively.
19. No exposed PE gas pipe under steel deck is allowed as welding slag from the jointing of steel deck may damage the gas pipe underneath unless proper protection agreed by HKCG. In other occasion, exposure of PE pipes should be avoided as far as practicable. Where exposure of PE pipes is inevitable, fire resistance protection wrapping of the exposed PE pipes should be installed and agreed with HKCG prior to application.
20. In case of emergency, contact HKCG at 28806999 which is manned 24 hours. If a gas leak is suspected, immediately stop work and evacuate the site personnel from the trenches. It should be noted that gas might travel through underground drains or conduits to other areas of the site. Evacuate the personnel from these areas if this is suspected.
21. HKCG should be consulted prior to any cutting or removal of a decommissioned gas pipe. As there may be residue gas inside a decommissioned gas pipe, cutting should only be employed by mechanical cutter or hack saw. In all circumstances, oxy-acetylene cutting **SHOULD NOT** be employed for cutting a decommissioned gas pipe.
22. Should there be settlement expected to be caused by the work, the predicted settlement contour should be forwarded to HKCG for assessment of the impact.
23. For plantation work with tree guard installation, the exact location and depth of the gas pipe should be confirmed by hand-dug trial holes prior to the driven of the tree guard into the ground to avoid damage of gas pipe underneath.
24. Due care should be given to the ancillary equipment attached to the gas main. Cathodic protection is installed for corrosion-resistant purpose and it has some cables linking from the gas pipe to the anodes and connected in a junction box placed in a pit. The anodes are normally installed at 1m away from the pipe whilst the anodes junction boxes would be installed at footpath at a distance from those gas main laid under carriageway.
25. The Code of Practice "Avoiding danger from gas pipes" has been prepared by the Gas Authority and approved and brought into effect in accordance with the provisions of section 9 of the Gas Safety Ordinance Cap 51 (the Ordinance). Its purpose is to provide practical guidance in respect of the requirements of the Ordinance and the Gas Safety (Gas Supply) Regulations (the regulations) concerning the avoidance of damage to gas pipes. These requirements are more specifically defined in regulation 23A of the regulations as follows-

"23A. Works in the vicinity of gas pipes

- 1) *No person shall carry out, or permit to be carried out, any works in the vicinity of a gas pipe unless he or the person carrying out the works has, before commencing the works, taken all reasonable steps to ascertain the location and position of the gas pipe.*
- 2) *A person who carries out, or who permits to be carried, any works in the vicinity of a gas pipes shall ensure that all reasonable measures are taken to protect the gas pipe from damage arising out of the works that would be likely to prejudice safety."*

General Requirements For Trenchless Work In The Vicinity Of Gas Pipes

1. Exact location and depth of the existing underground gas pipes in the path of the trenchless work should be ascertained prior to work commencement.
2. Gas pipes should not be decked or enclosed in confined space.
3. Should there be any existing gas main in adjacent to the proposed trenchless work area, a 24 hour real time gas detection system completed with notification procedure has to be installed at the locations agreed with HKCG throughout the entire construction period.
4. Clearance between the existing underground gas pipes and the proposed trenchless alignment should not be less than 3m for distribution mains and 5m for HP and IPB gas mains.
5. Peak Particle Velocity (PPV) induced in the course of trenchless works acting on the gas mains should not be greater than 25mm/sec and 0.2mm in amplitude.
6. Predicted Settlement Contour for the proposed work should be forwarded to HKCG for review of the impact, if any, to the existing gas system in advance. Written consent from HKCG must be sought prior to work commencement.
7. Details of settlement monitoring installation with proposed installation locations should be forwarded to HKCG for review.
8. Monitoring period should be commenced before the work commencement and extend throughout the course of the proposed work. Settlement monitoring shall be carried out at least daily. For inactive site after work commencement, settlement monitoring may be relaxed to at least weekly.
9. All settlement records should be forwarded to HKCG for reference at least monthly.
10. Should the recorded settlement figures diverging from the Predicted Settlement Contour, halt the work and inform HKCG immediately.

END

保護地下煤氣設施

GET
ALL
SAFE



煤氣
Towngas

緊急事故時

- 停止在嗅到煤氣味的位置及附近施工
- 熄滅所有火種
- 離開漏氣地點
- 在安全地點致電**999**報警或
2880 6999通知煤氣公司



1

確保已取得煤氣公司圖則
以找出煤氣管之大約位置



2

使用喉管探測器及手掘探孔確定煤氣管正確位置

3

切勿在煤氣管附近操作重型機械

4

小心西粉豎管及陰極保護裝置之電線

5

- 在喉管附近切勿使用明火。
- 對外露喉管提供足夠支撐。
- 盡量避免外露聚乙烯喉管。

損毀氣體喉管可導致煤氣洩漏，危害施工者本身及公眾安全。

根據氣體安全規例規定在氣體喉管附近進行工程的人士須確保：
採取合理步驟以確定氣體喉管所在位置；及
採取合理措施以保護氣體喉管不受損壞。

抵觸法例最高可被罰款200,000元及監禁12個月

6

如有需要，請與煤氣公司聯絡，召開工地會議。

電話：2963 1811

Attachment 11
Photos of Services of The Hong Kong and China Gas Co., Ltd.



Attachment 11

Photos of Services of The Hong Kong and China Gas Co., Ltd



Syphon



Saddle Fitting



Sacrificial Anode



Valve with Bleed Point