



Indented Writing on Paper Developed by Side Light Method

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Abstract: The Forensic Document Examination is the application of science in analysing the Questioned Documents. The Questioned Document Examiner studies letter design and size on two or more Document. On the basis of Handwriting Principles. After studying the marking, the Questioned Document expert ventures on opinion about whether the same person authored the two Documents or not, i.e. Examiner Examine the Document with the help of basic tool and techniques. This paper addresses a how to develop indented writing with the help of the side light method. The low Angeles of side light method is useful to visualisation Indented writing on the paper.

Keywords: Questioned Document, Indented, writing, side, light.

I. INTRODUCTION

Indented writing is the most important useful information about the questioned documents. Indented writing is also known as second-page writing. Indented writing impression is occurred due to writing equipment captured on sheets of paper below the original writing paper. Sometimes it is often found, when we used pads of paper for maintaining all record-keeping situation at school, college, office, house etc. Indented writing shows the anonymous or pseudonymous letters because, in anonymous letters, we do not see any symbol, signature, name or clue. Then the low angle of light in between 0° to 180° any suitable degree we used to identify the indented writing impression on the paper. If any symbol is present on the paper after used the sidelight method with a suitable angle, then photography is taken on the page.

Pen pressure or any instrument pressure on the paper directly shows the impression of indented writing. Indented writing is varied on the person by the person that means which pressure used to write any matters. If any person used to high pressure to write some matter on the page, then in the second page, we observed 70% to 90% indented writing impression to visible our naked eyes and in the third page 40% to 60% indented writing impression is visible. But if a person used medium or slow pressure to write any matter on the page then in the second page or third-page impression is not much

visible to our naked eyes. Along with pressure writing speed also indicate the indented impression on the paper.

II. MATERIALS AND METHODS

Material: Indented Papers, Light Lamps, Flash Light, Candle, Magnifying Glass, DSLR Camera, protractor for angle formation.

Methods: Indented writing was visualised by using various light sources held at an angle with the indented paper, and the shadows formed are thus visualised with the help of magnifying glass. A protractor is placed steadily on a non-disturbing surface and then different light sources such as LED flashlight, incandescent light lamps, Burning Candle are incident on the indented paper. Once the angle is set and the clearest picture of shadowed indented writing gets visible, it is photographed with the help of a DSLR camera.

III. RESULT & DISCUSSION



This research study shows ten types of different papers samples of Indented writing or second-page writing which is positively identified in various paper surfaces with the help of the sidelight method. Indented writing impression is observable and easily identified on the paper and it can be seen in Figures 1-5. Identified and Examination of Indented or second-page impression can be positively developed with the Sidelight method. In the present study, indented writing or second-page writing is fully developed by the Sidelight



method at a 45° angle. In 1 to 5 figure we used various angle, of the side light to find out the indented writing on the paper but the impression is visible at only 45° angle, it's a suitable angle to develop an impression as compared to other angles. The Developed successful results of these samples are given below.

S . N o	Angle of sidelight	Observed Image	2	60 Degrees	
			1	45 Degrees	
			3	90 Degrees	



4	110 Degrees		<p>ACKNOWLEDGMENT</p> <p>The authors would like to take this opportunity to gracefully thank Mr Harbans Singh Tuteja sir for always inspired us and sharing valuable information with us.</p> <p>REFERENCES</p> <p>[1]. Brown JL. Survey of techniques used to visualize indented markings. J Am Soc Quest Doc Exam 1998;1(2):107–12.</p> <p>[2]. Pearse ML, Brennan JS. Importance of absolute humidity in the operation of the electrostatic detection apparatus. Forensic Sci Int 1996;83:121–31.</p>
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IV. CONCLUSION

The result of this research paper has been concluding that the indented writing or second-page writing impression is developed at a 45 ° angle with the use of the method sidelight. This method is easily used by any forensic questioned document expert and within a time they get the perfect result and make a report. Hence the sidelight method is a *non-destructive* technique to develop indented writing or second-page writing on paper.

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BIOGRAPHY



Rakesh Mia a student of Forensic Science from Sage University Indore. He is attending various forensic science conferences and its related workshops and lectures at various places in India. He was done an internship under the MP police Indore branch for 45 days. He was done a 1-month internship at State forensic science laboratory, Tripura in the Forensic serology/ biology & toxicology division. He has been published 5 papers, abstracts in a national and international journal and conference. He has been working as a Founder & President of Applied Forensic Research Sciences. Recently he had been grant copyright under the Central Government.



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Vijay Panchal a student of Forensic Science from Sage University Indore. He has been attending various forensic science conferences and workshops & lectures from various places in India. He was done an internship under the MP police Indore branch for 45 days. He has been published 5 papers, abstracts in national and international journal and conference. He has been working as a Co-Founder & Vice-President of Applied Forensic Research Sciences. Recently he had been grant copyright under the Central Government